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AMSARA

Accession Medical Standards
Analysis & Research Activity



Attrition & Morbidity Data for 2013 Accessions

Annual Report 2014

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Executive Summary

The Accession Medical Standards Analysis and Research Activity (AMSARA) has completed its eighteenth year of providing the Department of Defense (DoD) with evidence-based evaluations of accession medical standards. AMSARA evaluates medical standards and retention programs to improve military readiness by maximizing both the accession and retention of motivated and capable recruits. This report provides findings from selected special studies and descriptive data on fiscal year (FY) 2013 accessions.

Section 1 of this report, Special Studies, presents brief reports on selected research conducted at AMSARA. Special studies in this annual report include:

- Analyses of Physical Demands Ratings (PDR) of enlisted Soldiers who are discharged in the first year of service
- PDR in Soldiers screened using the Tailored Adaptive Personality Assessment System (TAPAS)
- The Assessment of Recruit Motivation and Strength (ARMS) accession fitness test
- An analysis of healthcare utilization among Soldiers screened using TAPAS.

Section 2 of this report includes the descriptive statistics AMSARA compiles and publishes annually for historical and reference value. Descriptive statistics are for applicants who enlisted in FY13 and are compared to the five-year aggregate data from FY 2008-2012. Data are collected while the recruits are in their first year of service. By convention, the annual report is dated for the first complete year after enlistment (FY 2013). Comparisons can be made between services and between enlisted components (active, reserve, National Guard).

Approximately 287,000 active, reserve, and National Guard enlisted applicants were examined for medical fitness at Military Entrance Processing Stations (MEPS) in 2013, compared to approximately 318,000 per year average from 2008 to 2012. Among total number of active component applicants at MEPS between 2008 and 2013, about 20% of all applicants were medically disqualified, 8% of applicants applied for an accession medical waiver, 6% of total applicants were approved for a medical waiver, and 73% of waived applicants accessed. Among reserve component applicants at MEPS between 2008 and 2013, 21% of all applicants were medical disqualified, 7% of all applied for a waiver, 5% of all applicants were approved, with 69% accession rate in waiver applicants. Among National Guard applicants at MEPS between 2008 and 2013, the medical disqualification rate was 24% and the accession rate was 76%. Accession medical waiver data is currently incomplete for National Guard applicants.

In 2013, there were approximately 215,000 active, reserve, and National Guard enlisted accessions as compared to an average of 235,000 per year in the period from 2008 to 2012. Among active component accessions, between 2008 and 2013, 13% were accessed with a history of medical disqualification that was either remediated prior to accession or waived, 6% accessed with a waiver, and 3% of accessions were hospitalized in the first year of service. Among active component accessions, between 2008 and 2013, 3% of accessions had a discharge for conditions that existed prior to service (EPTS), 0.35% had a disability

discharge in the first year of service, and 12% experienced attrition in the first year of service. In reserve accessions 14% accessed with a previous medical disqualification, 5% accessed with a medical waiver, and 1% were hospitalized in the first year of service. About 1% of reserve accessions had an EPTS discharge and 0.17% had a disability discharge in the first year of service. Among National Guard accessions between 2008 and 2013, 15% accessed with a history of previous medical disqualification and 1% were hospitalized in the first year of service. About 1% of National Guard accessions had an EPTS discharge and 0.15% had a disability discharge in the first year of service. Attrition rates in the reserve component and National Guard are underestimated due to the high prevalence of interservice separation codes (ISC) indicating that the reason for the discharge was unknown.

Approximately 14% of applicants for active component enlisted service (2008-2012) were initially disqualified for service due to permanently disqualifying medical conditions, and another 6% received temporary disqualifications for conditions that could be remediated. Such recruits, however, are less likely to ultimately become service members, with approximately 48% of applicants with permanent disqualifications and 55% of applicants with temporarily disqualifying conditions subsequently entered into the active component, compared to 79% of fully qualified recruits who accessed. In 2013, disorders of refraction and accommodation (i.e. visual impairment) were the most common reason for medical disqualification. This is the second consecutive year since 1995 that body weight was not the most common reason for medical disqualification and was replaced by disorders of refraction and accommodation. Overweight/obesity and nondependent abuse of cannabis, both historically common temporary disqualifications, continued to decrease compared to previous years.

Accession medical waivers are considered by each service for applicants with a disqualifying medical condition. Accordingly, the conditions most frequently considered for a waiver closely reflect the most common permanently disqualifying conditions. In total, about 29,000 applications for accession medical waivers were considered in 2013. The percentage of waivers approved varies substantially by the medical condition being considered. The overall approval percentages ranged from 60% to over 90% for the most commonly applied for and most highly approved waivers. Differences in approval percentages between the services may reflect differences in the applicant pools applying to the services, different distributions of conditions being considered for waiver, or different needs of each service.

Hospitalization data are provided for the period from 2008 to 2013. In 2013, there were approximately 2,500 hospitalizations among enlistees (all services) in the first year of service. The rate of first year hospitalization in 2013 was lower than the rate observed for 2008-2012. The top reasons for hospitalization within the first year of service, among 2013 accessions, were psychiatric conditions, pneumonia, influenza, and infections of the skin and subcutaneous tissue. In the second year of service, the frequency of hospitalizations for complications of pregnancy increased dramatically when compared to the first year of service, with pregnancy the most common reason for hospital admission in the second year. The Army and Marine Corps enlistees who accessed in 2008-2012, had the highest risk of hospitalization. Navy enlistees had the lowest risk of hospitalization. Women, whites, those over 25 years of age at the time of enlistment, those with lower military aptitude score on the

Armed Forces Qualification Test (AFQT), and those with a permanent or temporary medical disqualification were at higher risk for hospitalization.

All-cause attrition of first-time active duty recruits following 90, 180, 365, and 730 days of service is also described. At two years, the Army had the highest rate of attrition for all services (approximately 18%) while the Air Force had the lowest (about 13%). Female sex, white race, older age at the time of enlistment, lower educational attainment, lower percentile score on the AFQT, and having a permanent or temporary medical disqualification were all characteristics associated with higher attrition.

Discharges of recent enlistees for medical conditions that existed prior to service are a costly problem for all branches of the military, and are considerably more common than data indicate as AMSARA EPTS records are incomplete. Documentation of EPTS discharges is requested from each Initial Entry Training (IET) site by the US Military Entrance Processing Command (USMEPCOM), but this reporting is not required by service regulations. The total numbers of reported discharges have varied over time and by training base.

Past AMSARA studies have shown that the great majority of EPTS discharges are for medical conditions that were not discovered or disclosed at the time of application for service, with concealment by the applicant being the most common scenario (Krauss MR, Niebuhr DN, Onaitis J, et al., Accession Medical Standards Analysis and Research Activity, 2003 Annual Report). Accordingly, the primary problem of EPTS discharges appears to be the bypassing of accession medical standards rather than the implementation of those standards. Psychiatric conditions, orthopedic conditions, and asthma continue to be the most common causes of EPTS discharges reported to USMEPCOM. Risk of EPTS discharge varies by service, with those in the Army having the lowest risk and Navy the highest. Increased risk of EPTS discharge is observed for females, recruits older than 30 years of age at accession, whites, recruits without a high school education at accession, recruits who scored in the lower AFQT percentile score groups, and recruits with a medical disqualification.

Disability evaluation is infrequent among new enlistees, with less than one percent of enlistees being considered for such a discharge within the first year of service. The rate of disability evaluation has decreased over the period 2008-2013. The most common disability evaluations during the first year of service for 2008 to 2013 accessions were for diseases of the spine, skull, limbs, and extremities in all services. Other common conditions prompting disability evaluation in the first year of service included prosthetic implants and diseases of the musculoskeletal system, and psychiatric and neurologic disorders. Risk of evaluation for disability discharge in the first year of service was highest in the Army and lowest in the Navy. Characteristics associated with increased risk of disability evaluation include being female, white, aged over 30 at time of accession, and having a lower AFQT score, and medical disqualification.

AMSARA is committed to further development of evidence-based medical standards to enable the DoD to enlist the highest quality applicants in a cost-effective manner, thereby ensuring a healthy, fit, and effective force. The following programmatic recommendations are based on more than 15 years of research:

1. Various databases must be improved. For example, waiver data do not provide sufficient clinical detail such as severity, duration and prognosis to allow analyses of waiver decision criteria.
2. EPTS classification and reporting from the IET sites to USMEPCOM, which is still passive, should be mandated and standardized by DoD/service regulations. Analysis would be enhanced with conversion from paper to digital records.
3. AMSARA should develop expertise in cost-benefit analyses in order to better advise DoD medical standards policy makers.
4. AMSARA should continue prospective and retrospective cohort studies similar to the Assessment of Recruit Motivation and Strength (a study evaluating those who exceed Army body fat standards using a physical fitness test on accession). There is a need to challenge current accession standards. MEPS-based studies, including assessments of the Omaha 5 and the Tailored Adaptive Personality Assessment System (TAPAS), that are outcome oriented (morbidity, occupational qualification and performance, deployability, and attrition) in the area of physical and mental fitness, including motivation to serve, should be prioritized.
5. Rather than study accession medical standards in isolation, medical standards across the continuum of a service member's life-cycle should be analyzed using evidence-based principles. This would include medical standards for deployment and retention, in addition to accession medical standards. In FY 2009, the Assistant of for Health Affairs, Clinical Program and Policy, directed AMSARA to systematically evaluate each service's Disability Evaluation System. The first annual retention medical standards analysis and research report was published for FY 2010, with subsequent reports since that time.

Introduction: Accession Medical Standards Analysis & Research Activity

The Medical-Personnel Executive Steering Committee (formerly the Accession Medical Standards Steering Committee) was established by the Under Secretary of Defense (Personnel and Readiness) to integrate the medical and personnel communities so they could provide policy guidance and establish standards for accession requirements. These standards stem from evidence-based information provided by analysis and research. The committee is co-chaired by the Deputy Assistant Secretary of Defense (Military Personnel Policy) and the Principal Deputy Assistant Secretary of Defense (Health Affairs). The committee comprises representatives from the Office of the Assistant Secretary of Defense for: Force Health Protection and Readiness, Clinical and Program Policy, Reserve and Manpower Personnel, and Civilian Personnel Policy, Offices of the Service Surgeons General, Offices of the Service Deputy Chiefs of Staff for Personnel, and Health and Safety Directorate (Department of Homeland Security, U.S. Coast Guard).

The Accession Medical Standards Working Group (AMSWG) is a subordinate working group that reviews accession medical policy issues contained in DoD Instruction 6130.03, entitled “Medical Standards for Appointment, Enlistment, or Induction in the Armed Forces.” This group is composed of representatives from each of the offices listed above.

AMSARA was established in 1996 within the Division of Preventive Medicine at Walter Reed Army Institute of Research. AMSARA supports the efforts of the Medical-Personnel Executive Steering Committee and the Accession Medical Standards Working Group. The AMSARA mission is to support the development of evidence-based medical standards by guiding the improvement of medical and administrative databases, conducting epidemiologic analyses, and integrating relevant operational, clinical, and economic considerations into policy recommendations. AMSARA has the following seven key objectives:

1. Validate current and proposed standards utilizing existing databases (e.g., should asthma as a child be disqualifying?);
2. Incorporate prospective research studies to challenge selected standards (e.g., are body weight standards adequate measures of fitness?);
3. Validate assessment techniques (e.g., improve current screening tools);
4. Perform quality assurance (e.g., monitor geographic variation);
5. Optimize assessment techniques (e.g., develop attrition and morbidity prediction models);
6. Track impact of policies, procedures, and waivers;
7. Recommend changes to enhance readiness, protect health, and save money.

Military staffing to support this effort includes MAJ Michael Boivin, Chief, Department of Epidemiology, Preventive Medicine Branch and LTC Paul Kwon, Director, Department of Preventive Medicine Branch.

AMSARA is augmented with contract support through ManTech Health. Staff in 2014 included: Dr. David N. Cowan, Program Manager; Elizabeth Packnett, Principal Public Health Analyst; Xiaoshu Feng, Statistician; Ricardford Connor, Hoda Elmasry, Alexis Oetting, Nadia Urban, Public Health Analysts; Janice Gary, Senior Task Supervisor (Admin); and Vielka Rivera, Program Administrative Assistant.

Special Studies

Temporal Trends in Attrition Rates among Soldiers by Physical Demands Rating: 2008-2013 Accessions

Background

Attrition is a costly and persistent problem in the military [1]. Several risk factors for military attrition have been identified: female sex, white race, young age, not having a high school diploma, and having low physical activity prior to enlistment, are all risk factors for first term attrition[2]. While there are several attrition risk factors in the Army, one that has not been explored is the physical requirements of each military occupation. Physically demanding jobs have been shown to lead to burnout and premature retirement in the civilian population [3, 4]. Given the high cost of training and potential relationship between physical occupation requirements and attrition in the military, this study sought to analyze the trends in 6-month and 1-year attrition rates in first term, enlisted US Army service members across increasing levels of military occupational specialty physical demands ratings.

Methods

US Army enlisted, active component Soldiers with a first accession date between FY 2008 and FY 2013 and a last loss date between FY 2008 and FY 2013 were included in this study. Service members missing an accession or loss date as well as those with an Inter-service Separation Codes (ISC) of Expiration of Term of Service (ETS) who have a subsequent accession within 7 days of their loss date were excluded from the study population after examining the distribution of days to accession after ETS loss.

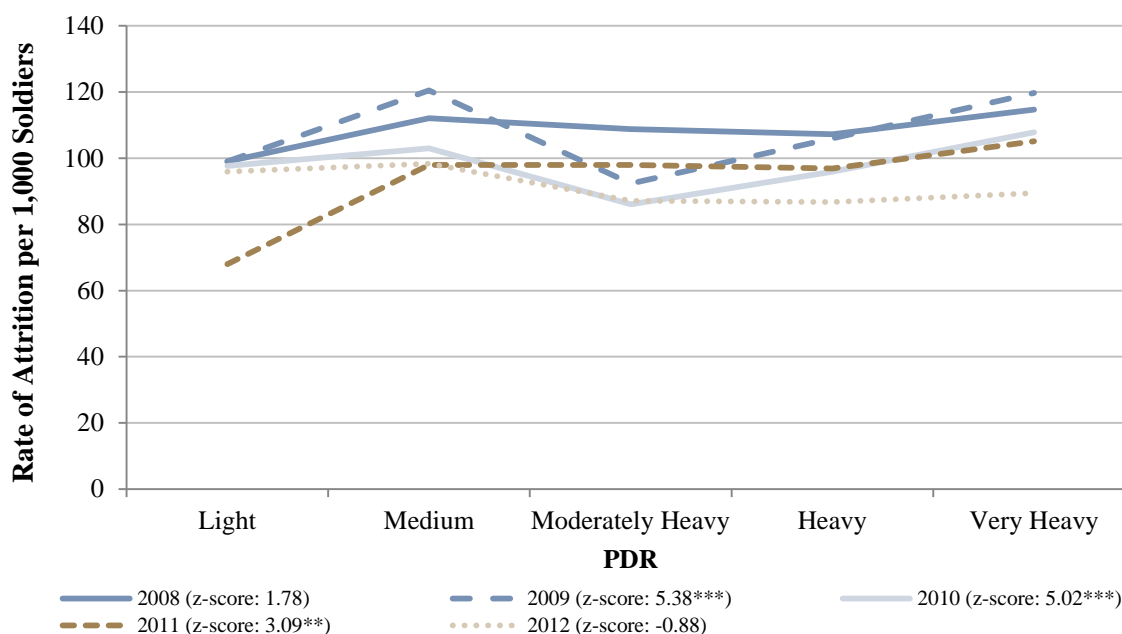
All physical demands rating (PDR) categorizations were defined using Army pamphlet 611-21[5]. PDR categories are divided into five groups: light, medium, moderately heavy, heavy and very heavy. Each Soldier is assigned a specific PDR based on the physical weight he or she is likely to carry during combat. Each PDR is linked to the individual's military occupational specialty (MOS). Given that the identifying number associated with an MOS is subject to change over time, to confirm the correct MOS was used, only individuals with an accession date that fell in between each MOS start and end date were selected.

In terms of 6 and 12 month attrition rates, 6 month attrition represents those who have completed between 0 and 180 days of service, and 12 month attrition reflects those who completed between 181 and 365 days of service. Presented are the rates of attrition per 1,000 first time enlisted, active duty Soldiers who fall into a same PDR category. When assessing the linear relationship between PDR and attrition, a Cochran-Armitage trend test was used. Poisson regression was employed to calculate the Incident Rate Ratios (IRR) and 95% Confidence Intervals (95% CI). Statistical significance was set to $\alpha = 0.05$.

Results

Included in the sample were 42,701 service members who were discharged in the first year of service, the vast majority (76%) of whom are discharged within 6 months. Figure 1.1 depicts the rate of 6 month attrition per 1,000 Soldiers by PDR. Between FY 2008 and 2011, there was a positive linear trend in attrition rate by increasing PDR; however the results were only statistically significant in FY 2009, 2010 and 2011.

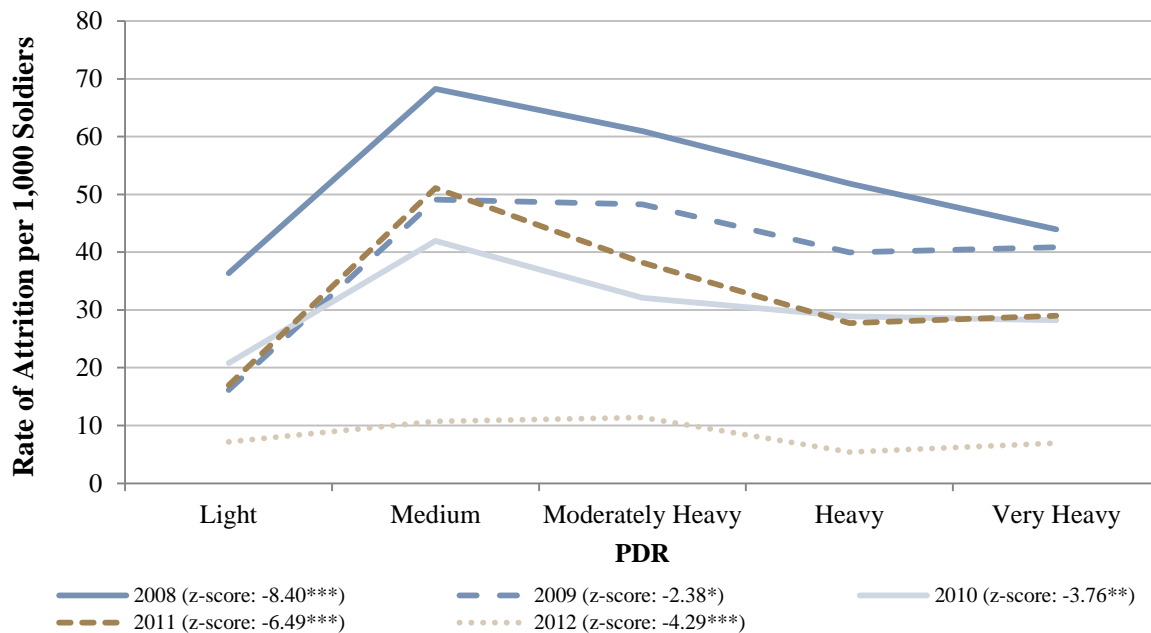
Figure 1.1: Rate of 6 month Attrition per 1,000 Soldiers by PDR



* p-value <0.05; ** p-value < 0.01; ***p-value <0.0001

When looking at the rates of 1 year attrition per 1,000 Soldiers by PDR (see Figure 1.2), the results show an inverse relationship between PDR and attrition. Between FY 2008 and 2012, there was a statistically significant negative linear trend between attrition and PDR. There was also more fluctuation in the attrition rates as it ranged from 5 attritions per 1,000 Soldiers (PDR: heavy, FY: 2012) to 68 attritions per 1,000 Soldiers (PDR: medium, FY: 2008).

Figure 1.2: Rate of 1 year Attrition per 1,000 Soldiers by PDR



* p-value < 0.05; ** p-value < 0.01; ***p-value < 0.0001

To further examine the relationship between attrition and PDR, the rates and trends of attrition were limited to include only those with medical ISC. Table 1.1 shows the 6 month attrition rates per 1,000 Soldiers, the Incident Rate Ratios (IRR) and 95% Confidence Intervals, as well as the z-scores, among female Soldiers with a medical ISC. In FY 2008, those female Soldiers who fell in the light category had a statistically significant lower incidence rate of attrition compared to those in the very heavy category (IRR: 0.7, 95% CI: 0.5-0.9). The majority of the remaining IRRs point to a nearly null relationship between PDR and attrition. The other results, which show a slightly elevated incidence of attrition, were not significant.

TABLE 1.1: 6-MONTH (0-6 MONTHS) ATTRITION RATE OF FEMALE SOLDIERS PER 1,000 SOLDIERS PER YEAR BY PDR (INCIDENT RATE RATIOS AND 95% CONFIDENCE INTERVALS) WITH A MEDICAL ISC

	Light			Medium			Moderately Heavy			Heavy			Very Heavy (REF)	
FY	Rate ⁺	IRR	95% CI	Rate ⁺	IRR	95% CI	Rate ⁺	IRR	95% CI	Rate ⁺	IRR	95% CI	Rate ⁺	z-score
2008	70	0.7	0.5-0.9	103	1.0	0.8-1.3	129	1.2	1.0-1.6	91	0.9	0.7-1.2	104	-0.9
2009	70	0.8	0.6-1.1	96	1.1	0.8-1.5	103	1.2	0.9-1.6	92	1.1	0.8-1.4	87	-1.3
2010	64	0.9	0.6-1.2	71	1.0	0.7-1.4	76	1.1	0.8-1.5	83	1.2	0.9-1.6	71	-0.1
2011	80	0.9	0.6-1.2	80	0.9	0.6-1.2	83	0.9	0.7-1.2	88	0.9	0.7-1.3	93	1.7
2012	101	1.3	1.0-1.8	69	0.9	0.7-1.2	63	0.8	0.6-1.1	73	1.0	0.7-1.3	77	1.0

FY: Fiscal Year; IRR: Incidence Rate Ratio; CI: Confidence Interval; REF: Referent Group

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[†]Rate per 1,000 female soldiers per year

* p-value < 0.05; ** p-value < 0.01; *** p-value < 0.0001

Table 1.2 examines the 6 month attrition rates by FY and PDR among male Soldiers with a medical ISC. The vast majority of the IRRs show being in a lower PDR category is protective against attrition (compared to those in the very heavy PDR category). In FY 2008, this association is also statistically significant in the light, moderately heavy and heavy categories. Furthermore, in all FYs, except for FY 2012, there is a statistically significant positive linear trend between attrition and increasing PDR.

TABLE 1.2: 6-MONTH (0-6 MONTHS) ATTRITION RATE OF MALE SOLDIERS PER 1,000 SOLDIERS BY PDR (RATE RATIOS AND 95% CONFIDENCE INTERVALS)WITH A MEDICAL ISC

	Light			Medium			Moderately Heavy			Heavy			Very Heavy (REF)	
FY	Rate [†]	IRR	95% CI	Rate [†]	IRR	95% CI	Rate [†]	IRR	95% CI	Rate [†]	IRR	95% CI	Rate [†]	z-score
2008	39	0.6	0.4-0.9	41	0.6	0.4-0.9	56	0.6	0.4-0.9	49	0.6	0.4-0.9	66	6.45***
2009	41	0.6	0.4-0.9	46	0.7	0.5-1.0	44	0.7	0.5-1.0	43	0.7	0.5-1.0	65	8.27***
2010	48	1.1	0.7-1.6	29	0.6	0.4-1.0	36	0.6	0.4-1.0	31	0.6	0.4-1.0	45	5.56***
2011	36	0.8	0.5-1.2	30	0.7	0.4-1.1	34	0.7	0.4-1.1	36	0.7	0.4-1.0	44	5.17***
2012	47	1.4	0.9-2.1	27	0.8	0.5-1.3	34	0.8	0.5-1.3	33	0.8	0.5-1.3	34	0.7

FY: Fiscal Year; IRR: Incidence Rate Ratio; CI: Confidence Interval; REF: Referent Group

[†]Rate per 1,000 male soldiers per year

* p-value < 0.05; ** p-value < 0.01; *** p-value < 0.0001

When looking at the rate of 1 year attrition among female Soldiers with medical ISC, most results show an increased incidence of attrition in PDR category compared to the very heavy category (see Table 1.3). Between FY 2008 and 2010, the incidence of 1 year attrition was almost twice as likely in the moderately heavy category compared to the very heavy category, and the results were statistically significant. However, similar to the results in Table 1, there was a protective relationship between PDR and attrition in the Light category for all years except FY 2012. Additionally, in that same time frame, there was a significant negative linear trend between PDR and attrition.

TABLE 1.3: 1-YEAR (6-12 MONTHS) ATTRITION RATE PER 1,000 SOLDIERS, RATE RATIOS AND 95% CONFIDENCE INTERVALS AMONG FEMALE SOLDIERS WITH A MEDICAL ISC

	Light			Medium			Moderately Heavy			Heavy			Very Heavy (REF)	
FY	Rate [†]	IRR	95% CI	Rate [†]	IRR	95% CI	Rate [†]	IRR	95% CI	Rate [†]	IRR	95% CI	Rate [†]	z-score
2008	22	0.7	0.4-1.2	44	1.4	0.9-2.3	66	2.2	1.4-3.3	37	1.2	0.8-2.0	31	-3.76**
2009	15	0.5	0.3-1.0	43	1.5	0.9-2.4	52	1.8	1.2-2.9	32	1.1	0.7-1.9	28	-3.16**
2010	11	0.7	0.3-1.5	20	1.3	0.7-2.4	35	2.2	1.2-4.0	19	1.2	0.6-2.4	16	-2.62**
2011	12	0.6	0.3-1.1	27	1.2	0.7-2.1	35	1.6	0.9-2.6	18	0.8	0.4-1.4	22	-1.8
2012	7	1.2	0.4-3.5	5	0.9	0.3-2.9	11	1.9	0.7-5.0	5	0.8	0.2-2.6	6	-0.9

FY: Fiscal Year; IRR: Incidence Rate Ratio; CI: Confidence Interval; REF: Referent Group

[†]Rate per 1,000 male soldiers per year

* p-value < 0.05; ** p-value < 0.01; *** p-value < 0.0001

Among males with a medical ISC, the rate and IRR of 1 year attrition showed varying results (see Table 1.4). Consistent with previous results, in FY 2008, those male Soldiers in the light category had a lower incidence rate of attrition compared to those in the very heavy category (IRR: 0.2, 95% CI: 0.1-0.6). Additionally, in FY 2008 and FY 2010, there was a significant negative linear trend between attrition and PDR.

TABLE 1.4: 1-YEAR (6-12 MONTHS) ATTRITION RATE PER 1,000 SOLDIERS, RATE RATIOS AND 95% CONFIDENCE INTERVALS AMONG MALE SOLDIERS WITH A MEDICAL ISC

	Light			Medium			Moderately Heavy			Heavy			Very Heavy (REF)	
FY	Rate [†]	IRR	95% CI	Rate [†]	IRR	95% CI	Rate [†]	IRR	95% CI	Rate [†]	IRR	95% CI	Rate [†]	z-score
2008	3	0.2	0.1-0.6	23	1.4	0.3-2.6	25	1.5	0.3-2.8	15	0.9	0.4-1.8	17	-3.99***
2009	14	0.9	0.4-1.8	18	1.2	0.6-2.3	17	1.1	0.6-2.2	16	1.0	0.5-2.1	15	-1.3
2010	0.0	0.0	-	18	1.7	0.8-3.7	11	1.0	0.4-2.4	15	1.4	0.6-3.1	10	-2.32*
2011	0.0	0.0	-	10	1.0	0.4-2.4	15	1.5	0.7-3.3	10	1.0	0.4-2.4	10	-1.7
2012	0.0	0.0	-	2	0.8	0.1-4.6	3	1.0	0.2-5.3	2	0.8	0.1-4.7	3	0.5

FY: Fiscal Year; IRR: Incidence Rate Ratio; CI: Confidence Interval; REF: Referent Group

[†]Rate per 1,000 male soldiers per year

* p-value < 0.05; ** p-value < 0.01; *** p-value < 0.0001

Discussion

There was much variation between the 6 month and 1 year attrition rates across PDR. The rate of 6 month attrition significantly increased across increasing levels of PDR for FY 2009 to 2011. However, when looking at 1 year attrition, the results showed the opposite with attrition significantly decreasing across increasing levels of PDR for all years in the study.

When the data were stratified by sex and included only those with a medical ISC, the linear trend for 6 month attrition disappeared among women but was consistently positive among men. Among men, the IRRs of attrition were protective for nearly all years and all lower levels of PDR compared to the Very Heavy category; however, the majority of IRRs were not statistically significant. The results were varied when looking at the 1 year attrition rate as some categories showed a protective effect against attrition while others showed an increased incidence. Among both men and women, there was a significant negative linear relationship PDR and attrition in FY 2008 and 2010.

Considering the costs associated with attrition and the significant positive association between 6 month attrition and PDR, further research is necessary to explore the function of PDR in attrition. Additionally, given that PDR is modifiable factor, such research could provide additional guidance for assigning Soldiers into the most suitable PDR category.

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Physical Demands Rating among ARMS Participants by Fitness and Obesity Status

Background

The physical demands rating (PDR) is used to categorize the degree of physical work requirements for an Army service member in a combat environment [1]. Hollander, et al. observed a higher incidence of injury among Soldiers assigned heavy PDR ratings [2]. Previous studies have shown Soldiers who are physically unfit and those who exceed body fat standards are at higher risk of musculoskeletal injury [3-5]. The following descriptive analysis was done to determine if the frequency of fitness and exceeding percent body fat accession standards of first-time enlisted US Army trainees varies across increasing levels of military occupational specialty PDR.

Methods

This analysis is based on data from the Assessment of Recruit Motivation and Strength (ARMS) study. Study subjects included male and female active duty members enlisting in the US Army for the first time between February 2005 and September 2006 at six Military Entrance Processing Stations (MEPS).

Everyone entering the Army through one of the study sites was required to take a pre-accession physical fitness test (ARMS test) consisting of a five minute step test set by a metronome at a pace of 120 steps per minute. Those who passed were considered fit, and those who failed were considered unfit. An ARMS waiver was granted to those who exceeded accession body fat percent standards (EBF) and passed the physical fitness test. Performance on the ARMS test did not impact the eligibility of weight-qualified (WQ) study subjects to enter service. The objectives and design of the ARMS study have been described elsewhere [3-12].

The five physical demands rating categories include light, medium, moderately heavy, heavy and very heavy. The PDR reflects the relative estimated frequency or duration and intensity of lifting demands required for a job. The PDR of each MOS is described in the Department of the Army Pamphlet 611-21.

Subject characteristics are provided in tabular form. Differences in distribution between groups were tested using a chi-square test. Missing values were excluded when calculating the chi-square statistic.

Results

There were 11,369 subjects analyzed. There were 10,216 WQ (7,713 fit and 2,503 unfit) and 1,153 EBF study participants (Table 1.5). Among men, the proportion of eighteen and nineteen year-old subjects tended to be higher among WQ fit versus WQ unfit groups (46.3% and 40.7%, respectively). EBF fit men were similar in age to WQ fit men. The proportions of smokers were

similar between male WQ fit and unfit subjects (26.3% and 25.6%, respectively). However, among male fit subjects, the proportion of smokers was slightly higher among WQ versus EBF (26.3% and 23.1%, respectively). Among WQ male subjects, a larger percentage of unfit individuals were categorized as obese compared to those who were fit (19.2% and 11.8%, respectively). Among women, the distribution of age category and smoking status were generally similar between the WQ and EBF fit groups and WQ fit and unfit groups. The proportions of female subjects in the four BMI categories were similar between the WQ fit and WQ unfit groups. Among all fit individuals, BMI differed between WQ and EBF.

TABLE 1.5: CHARACTERISTICS OF ARMS STUDY POPULATION

Men	WQ: Fit (n=6,646)		WQ: Unfit (n=1,976)		P ¹	EBF: Fit (n=834)		P ²
	n	%	n	%		n	%	
Age (Years)								
18-19	3,080	46.3	804	40.7	<0.0001	365	43.8	0.078
20-24	2,755	41.5	875	44.3		379	45.4	
≥ 25	811	12.2	297	15.0		90	10.8	
Smoker ³								
No	4,805	72.3	1,468	74.3	0.373	635	76.1	<0.05
Yes	1,745	26.3	506	25.6		193	23.1	
Missing	96	1.4	2	0.1		6	0.7	
BMI								
Underweight	234	3.5	55	2.8	<0.0001	0	0.0	<0.0001
Normal weight	3,766	56.7	808	40.9		6	0.7	
Overweight	1,861	28.0	733	37.1		111	13.3	
Obese	785	11.8	380	19.2		717	86.0	
Women	WQ: Fit (n=1,067)		WQ: Unfit (n=527)			EBF: Fit (n=319)		
Age (Years)								
18-19	520	48.7	241	45.7	0.061	153	48.0	0.731
20-24	406	38.1	193	36.6		128	40.1	
≥ 25	141	13.2	93	17.6		38	11.9	
Smoker ³								
No	856	80.2	420	79.7	0.426	264	82.8	0.189
Yes	196	18.4	107	20.3		48	15.0	
Missing	15	1.4	0	0.0		7	2.2	
BMI								
Underweight	48	4.5	28	5.3	0.696	0	0.0	<0.0001
Normal weight	697	65.3	349	66.2		17	5.3	
Overweight	294	27.6	140	26.6		252	79.0	
Obese	28	2.6	10	1.9		50	15.7	

WQ: Weight Qualified; EBF: Exceeds Body Fat Standards; BMI: Body Mass Index

¹Comparisons made between WQ step test passers and WQ step test failers

²Comparisons made between WQ step test passers and EBF step test passers

³Missing values excluded from chi-square calculation

Among WQ subjects (Table 1.6), there was some suggestion of a relationship between PDR and fitness among men ($p=0.057$). The proportion of fit subjects with a very heavy PDR was slightly higher than that observed among unfit subjects (67.9% and 65.4%, respectively). PDR ratings were similar between female fit and unfit subjects.

TABLE 1.6: PHYSICAL DEMANDS RATING BY STEP TEST STATUS AMONG WEIGHT-QUALIFIED ARMS PARTICIPANTS

Physical Demands Rating	Men					Women				
	Fit (n=6,646)		Unfit (n=1,976)		P ¹	Fit (n=1,067)		Unfit (n=527)		P ¹
	n	%	n	%		n	%	n	%	
Light	41	0.6	10	0.5	0.057	19	1.8	7	1.3	0.330
Medium	273	4.1	88	4.5		157	14.7	65	12.3	
Moderately Heavy	758	11.4	261	13.2		237	22.2	132	25.0	
Heavy	614	9.2	210	10.6		222	20.8	100	19.0	
Very Heavy	4,512	67.9	1293	65.4		365	34.2	197	37.4	
N/A	14	0.3	1	0.1		2	0.5	0	0.0	
Missing PDR	372	5.6	100	5.1		51	4.8	21	4.0	
Missing MOS	62	0.9	13	0.7		14	1.3	5	0.9	

PDR: Physical Demands Rating; MOS: Military Occupational Specialty

¹Comparisons made between fit and unfit subjects for those with a valid PDR (missing and N/A excluded)

Among fit subjects (Table 1.7), PDR ratings were similar between male WQ and EBF subjects. Among fit women, the proportion of subjects assigned a very heavy PDR was marginally higher in women who exceeded body fat standards (36.9%) versus those who were weight-qualified (34.2%).

TABLE 1.7: PHYSICAL DEMANDS RATING BY ARMS WAIVER STATUS AMONG ARMS STEP TEST PASSERS

Physical Demands Rating	Men					Women				
	WQ (n=6,646)		EBF (n=834)		P ¹	WQ (n=1,067)		EBF (n=319)		P ¹
	n	%	n	%		n	%	n	%	
Light	41	0.6	4	0.5	0.599	19	1.8	4	1.3	0.112
Medium	273	4.1	39	4.7		157	14.7	32	10.1	
Moderately Heavy	758	11.4	105	12.6		237	22.2	86	27.1	
Heavy	614	9.2	87	10.4		222	20.8	61	19.2	
Very Heavy	4,512	67.9	556	66.7		365	34.2	117	36.9	
N/A	14	0.3	0	0.0		2	0.5	0	0.0	
Missing PDR	372	5.6	39	4.7		51	4.8	16	5.0	
Missing MOS	62	0.9	4	0.5		14	1.3	1	0.3	

PDR: Physical Demands Rating; MOS: Military Occupational Specialty; WQ: Weight Qualified; EBF: Exceeds Body Fat Standards

¹Comparisons made between fit and unfit subjects for those with a valid PDR (missing and N/A excluded)

Discussion

The objective of this analysis was to determine if among Soldiers, the frequency of physical fitness and excess body fat varies across increasing levels of military occupational specialty physical demands ratings. This preliminary analysis suggests that the proportions of individuals assigned higher levels of military occupational specialty physical demand ratings were not

significantly different by fitness or excess body fat in either female or male US Army trainees. Therefore, it appears that current PDR assignment procedures are not influenced by weight and fitness status. Further research is needed to explore whether demographic characteristics such as age and education impact this relationship.

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Physical Demands Ratings and TAPAS Physical Conditioning Scores among US Army Accessions

Background

Personality assessment tests have been studied as predictors of job performance and as tools for personnel selection in civilian and military work settings [1-4]. The Army Research Institute of the Behavioral and Social Sciences (ARI) has shown that non-cognitive attributes such as personality, interests, and values are effective in predicting entry-level Soldier performance and retention [5]. ARI developed the Tailored Adaptive Personality Assessment System (TAPAS) to improve selection of new recruits and increase personnel management flexibility by predicting motivational outcomes (e.g., job effort, physical fitness, and drive to perform at a high standard). TAPAS measures fifteen personality dimensions thought to be associated with motivation and job performance [1, 2].

A Soldier entering the military is assigned a military occupational specialty (MOS) that is categorized by the relative level of physical demands of the job in order to assign Soldiers to jobs for which they are physically qualified. The physical demands rating (PDR) for a given MOS is defined according to the work requirements a Soldier would need to perform in a combat environment [6]. Enlistees with physically demanding jobs have been shown to be at increased risk for on-duty injuries and disability [7]. One military-specific dimension in TAPAS, called the “physical conditioning dimension,” measures an applicant’s belief and attitudes about physical activity. AMSARA’s previous work with the TAPAS physical conditioning dimension has shown it to be associated with ambulatory musculoskeletal injuries [8] and injury-related healthcare utilization (see current report). It is possible that TAPAS could provide additional information about an applicant that could be used in assigning an MOS. The purpose of this study is to determine whether the TAPAS physical conditioning dimension is associated with physical demand rating for an enlistee’s MOS.

Methods

The study population was United States Army fiscal year (FY) 2010 accessions who had taken TAPAS. ARI provided TAPAS scores for all fifteen dimensions; however, for this study we were only interested in associations between the physical conditioning dimension and PDR. TAPAS physical conditioning scores were divided into quintiles separately for men and women. All PDR categories were obtained from Army pamphlet 611-21 [6]. The five physical demands rating categories are light (lift maximum 20 pounds), medium (lift maximum 50 pounds), moderately heavy (lift maximum 80 pounds), heavy (lift maximum 100 pounds), and very heavy (lift on occasional basis over 100 pounds). For this study, due to the small number of Soldiers with PDR of light and medium enlistees and little difference between physical condition scores in those with light and medium PDR, they were combined into one group. There were some individuals who had an MOS that did not have a PDR or the PDR was listed as “not applicable”.

Individuals with PDR listed as not applicable were grouped with those missing a PDR and excluded from the trend analysis.

Measures of association between PDR and physical conditioning quintile were determined using the Gamma statistic for ordinal data. The results are stratified by sex.

Results

There were 13,145 men and 1,937 women with TAPAS scores who accessed in FY 2010. The distribution of PDR by sex is shown in Table 1.8. There were 677 (5.2%) men and 120 (6.2%) women who had an MOS in the not applicable and missing category who were not included in the statistical analysis. Among men, a majority of the men were in the very heavy category (68.0%), approximately 11% in both the heavy and moderately heavy categories, and only 3.2% in the light/medium category. Although most women were assigned an MOS in the very heavy category, there was a much smaller proportion of women (41.7%) in that category compared to men. Among the other categories, 22.6% of women were in the heavy category, 17.6% in the moderately heavy category, and 11.9% in the light/medium category.

TABLE 1.8: PHYSICAL DEMANDS RATING AMONG TAPAS FY10 ACCESSIONS

Physical Demands Rating	Men		Women		Total	
	n	%	n	%	n	%
Light/Medium	487	3.7	231	11.9	718	4.8
Moderately Heavy	1,558	11.9	341	17.6	1,899	12.6
Heavy	1,480	11.3	438	22.6	1,918	12.7
Very Heavy	8,943	68.0	807	41.7	9,750	64.6
N/A or Missing PDR	677	5.2	120	6.2	797	5.3
Total	13,145		1,937		15,082	

PDR: Physical Demands Rating

The distribution of PDR by physical conditioning quintile among men enlistees is shown in Table 1.9. For the light/medium, moderately heavy, and heavy categories, the proportion of individuals in those PDR categories decreased with increasing physical conditioning quintile, while for the very heavy category, the proportion of individuals increased with increasing physical conditioning quintile ($p < 0.0001$).

TABLE 1.9: PHYSICAL DEMAND RATING BY TAPAS PHYSICAL CONDITIONING DIMENSION SCORE QUINTILE, MEN

Physical Demands Rating	TAPAS Physical Conditioning Dimension Quintile					P value (trend)
	Q1(low) n (%)	Q2 n (%)	Q3 n (%)	Q4 n (%)	Q5(high) n (%)	
Light/Medium	121 (4.5)	100 (3.8)	98 (3.8)	99 (3.8)	69 (2.6)	<0.0001
Moderately Heavy	381 (14.3)	315 (12.0)	290 (11.2)	277 (10.7)	295 (11.1)	
Heavy	390 (14.6)	332 (12.6)	296 (11.4)	258 (10.0)	204 (7.7)	
Very Heavy	1,622 (60.8)	1,731 (65.8)	1,749 (67.4)	1,842 (71.2)	1,999 (75.1)	
N/A or Missing PDR	155 (5.8)	151 (5.7)	164 (6.3)	111 (4.3)	96 (3.6)	
Total	2,669	2,629	2,597	2,587	2,663	

PDR: Physical Demands Rating; Q: Quintile

In Table 1.10, among women enlistees, there was no association between PDR and physical conditioning scores ($p = 0.4762$).

TABLE 1.10: PHYSICAL DEMANDS RATING BY TAPAS PHYSICAL CONDITIONING DIMENSION SCORE QUINTILE, WOMEN

Physical Demands Rating	TAPAS Physical Conditioning Dimension Quintile					P value (trend)
	Q1(low) n (%)	Q2 n (%)	Q3 n (%)	Q4 n (%)	Q5(high) n (%)	
Light/Medium	51 (13.1)	51 (12.8)	37 (9.9)	51 (13.0)	41 (10.6)	0.4762
Moderately Heavy	55 (14.1)	66 (16.6)	79 (21.1)	61 (15.6)	80 (20.8)	
Heavy	106 (27.2)	96 (24.2)	71 (19.0)	97 (24.8)	68 (17.7)	
Very Heavy	164 (42.1)	164 (41.3)	157 (42.0)	159 (40.7)	163 (42.3)	
N/A or Missing PDR	14 (3.6)	20 (5.0)	30 (8.0)	23 (5.9)	33 (8.6)	
Total	390	397	374	391	385	

PDR: Physical Demands Rating; Q: Quintile

Discussion

A majority of enlistees in the study population were in the very heavy PDR category, although a higher proportion of men were in this category than women. This difference is most likely due to Department of Defense restrictions that exclude women from assignment to units below the brigade level and military occupations whose primary mission is to engage in direct combat on the ground, which was still in effect during the study period [9]. A majority of combat-related MOSs, such as infantry, are categorized as having very heavy physical demands.

There was a significant association between PDR and physical conditioning score among men ($Z=10.48$, $p<0.0001$) to indicate that PDR increased with increasing physical conditioning score. This might indicate that the men who are more physically fit are being assigned to the more physically demanding MOSs. There was no association between PDR and physical conditioning score among women.

Since enlistees in more physically demanding occupations are at increased risk for musculoskeletal injuries (MSI) [7] and higher TAPAS physical conditioning scores are associated with lower incidence of MSI [8], the next step may be to look at whether the protective effect against MSI in low physical demand MOS is modified by the TAPAS physical conditioning score in men.

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Healthcare Utilization for Overuse Musculoskeletal Injuries among US Army Active Duty TAPAS Test-Takers

Background

Overuse musculoskeletal injuries (MSI) have been a long-standing problem among military trainees as they can lead to lost training time, additional health care utilization, and attrition. In addition to other risk factors such as age [1], smoking [1, 2], female sex [2, 3], and Body Mass Index (BMI) [4, 5], physical fitness and physical activity prior to entering the military are key risk factors for overuse MSIs in the military training environment [1-7]. Despite the association between physical fitness and MSIs during training, there are no current enlistment standards for physical fitness prior to accession into the Army.

AMSARA has shown previously that a self-report measure of physical activity, as part of a personality test, is associated with incident MSI in the first year of service [8]. The Tailored Adaptive Personality Assessment System (TAPAS) is a non-cognitive personality test developed by the Drasgow Consulting Group for the Army Research Institute for the Behavioral and Social Sciences (ARI) in order to screen Army and Air Force applicants for probability of attrition and overall military success without relying on cognitive abilities or education level. TAPAS measures fifteen personality dimensions associated with motivation and job performance. The dimensions include achievement, adjustment, attention-seeking, cooperation, dominance, even-temperedness, generosity, intellectual efficiency, non-delinquency, optimism, order, self-control, sociability, tolerance, and physical conditioning, which is a dimension created specifically for use in the military. The physical conditioning dimension measures an applicant's attitudes about physical activity rather than physical fitness level. High scoring individuals "routinely participate in vigorous sports or exercise and enjoy hard physical work" [9]. Lower scorers on the physical conditioning dimension were more likely to have an overuse MSI compared to higher scorers [8].

In this study, we seek to expand on that prior MSI work with TAPAS and determine whether TAPAS physical conditioning scores of individuals with an incident MSI within the first six months of service are associated with injury-related outpatient healthcare utilization among individuals.

Methods

This study used United States Army FY 2010 accessions who had taken TAPAS to determine whether the TAPAS physical conditioning dimension score was associated with outpatient health care utilization for overuse musculoskeletal injuries during the first six months of service.

TAPAS is a self-report personality measure in which applicants are asked to choose between two paired statements the statement that best describes them. The statements, which address one of the fifteen different personality dimensions TAPAS measures, are matched in terms of social desirability, making it difficult to fake a good score. [9-11].

ARI provided TAPAS dimension scores for 13,145 men and 1,937 women who were U.S. Army Active Duty accessions, without prior service, who accessed in fiscal year 2010. These individuals were matched to AMSARA's accession, discharge, and ambulatory medical data. TAPAS physical conditioning dimension scores were divided into quintiles (Q1 = lowest scores; Q5 = highest scorers) separately for men and women. All analyses were stratified by sex.

The musculoskeletal injuries chosen (for complete list see AMSARA Annual Report 2013) are common among military trainees and can be categorized as pains, sprains and strains, tendinitis, stress fractures, arthropathies, and fasciitis. All ambulatory medical encounters for an overuse injury were captured based on International Classification of Diseases, 9th Revision (ICD-9) codes. All visits having unique appointment identification numbers with an ICD-9 code for an overuse injury were counted.

The primary predictor of interest was TAPAS physical conditioning dimension score. Other covariates include race, age, body mass index (BMI), medical status (fully qualified, permanent disqualification, or temporary disqualification), and physical demands rating (PDR) for Soldiers military occupational specialty (MOS). Utilization rate (UR) was defined as the number of ambulatory medical visits per 1000 person-days of follow-up. Crude and adjusted utilization rates and rate ratios were calculated using Poisson regression models, adjusted for other covariates.

Results

Table 1.11 shows the demographic and pre-accession medical characteristics of the study population by sex. The male population was primarily white, under the age of 25, with a BMI in the normal or overweight categories, without an accession medical waiver, and placed in an MOS with very heavy physical demands. The female population was similar to the male population in the distribution of age and medical status. More women were placed in an MOS with heavy physical demand rating and there were a low number of obese women who accessed.

TABLE 1.11: DEMOGRAPHIC CHARACTERISTICS OF TAPAS POPULATION, BY SEX

Characteristic	Level	Men		Women	
		n	%	n	%
PC Quintile	Q1	2,669	20.3	390	20.1
	Q2	2,629	20.0	397	20.5
	Q3	2,597	19.8	374	19.3
	Q4	2,587	19.7	391	20.2
	Q5	2,663	20.3	385	19.9
Race	White	10,443	79.4	1,318	68.0
	Black	1,378	10.5	419	21.6
	Other	1,324	10.1	200	10.3
Age at Accession	17-20	6,694	50.9	982	50.7
	21-25	4,568	34.8	648	33.5
	> 25	1,883	14.3	307	15.9
BMI	Underweight	153	1.2	35	1.8
	Normal	5,739	43.7	1,143	59.0
	Overweight	5,184	39.4	734	37.9
	Obese	2,069	15.7	25	1.3
Medical Status	Fully Qualified	12,377	94.2	1,833	94.6
	Medically Waived	768	5.8	104	5.4
PDR	Light/Medium	487	3.7	231	11.9
	Moderately Heavy	1,558	11.9	341	17.6
	Heavy	1,480	11.3	438	22.6
	Very Heavy	8,943	68.0	807	41.7
	N/A or Missing	677	5.2	120	6.2
Total		13,145		1,937	

PDR: Physical Demands Rating; PC: Physical Conditioning; Q: Quintile; BMI: Body Mass Index

The healthcare utilization for overuse injuries in men is shown in Table 1.12. The utilization rate was higher among the lowest physical conditioning scorers compared to all other quintiles. Utilization was highest among male enlistees who were white, older than 25, obese, medically waived, and assigned to an MOS with a light/medium physical demand.

TABLE 1.12: HEALTHCARE UTILIZATION FOR OVERUSE INJURIES, MEN

Characteristic	Category	Visits (n)	Total person days (1000s)	UR [†]	Crude RR	95% CI
PC Quintile	Q1	2,960	155.33	19.1	1.22	(1.15, 1.30)
	Q2	2,461	138.00	17.8	1.15	(1.08, 1.22)
	Q3	2,052	121.84	16.8	1.08	(1.01, 1.15)
	Q4	2,040	116.93	17.4	1.12	(1.05, 1.20)
	Q5 (REF)	1,657	106.48	15.6	1.00	-
Race	White (REF)	8,992	508.67	17.7	1.00	-
	Black	1,110	69.16	16.1	0.91	(0.82, 0.97)
	Other	1,068	60.74	17.6	0.99	(0.93, 1.06)
Age at Accession	17-20 (REF)	4,799	298.29	16.1	1.00	-
	21-25	3,878	227.25	17.1	1.06	(1.02, 1.11)
	> 25	2,493	113.04	22.1	1.37	(1.31, 1.44)
BMI	Underweight	131	7.98	16.4	1.01	(0.84, 1.20)
	Normal (REF)	4,359	267.08	16.3	1.00	-
	Overweight	4,446	248.96	17.9	1.09	(1.05, 1.14)
	Obese	2,234	114.55	19.5	1.19	(1.14, 1.26)
Medical Status	Fully Qualified (REF)	10,464	601.30	17.4	1.00	-
	Medically Waived	706	37.28	18.9	1.09	(1.01, 1.17)
PDR for	Light/Medium	431	20.60	20.9	1.20	(1.09, 1.32)
MOS	Moderately Heavy	1,233	67.75	18.2	1.04	(0.98, 1.10)
	Heavy	1,070	69.77	15.3	0.88	(0.82, 0.93)
	Very Heavy (REF)	7,741	442.33	17.5	1.00	-
	N/A or Missing	695	38.13	18.2	1.04	(0.96, 1.13)

PDR: Physical Demands Rating; PC: Physical Conditioning; Q: Quintile; BMI: Body Mass Index; UR: Utilization Rate; URR: Utilization Rate Ratio; CI: Confidence Interval; REF: Referent Group

[†]Rate of visits per 1,000 person days

In Table 1.13, Utilization rates for women generally decreased as physical conditioning scores increased. Utilization was highest among female enlistees who were white, older than 25, overweight, medically waived, and assigned to an MOS with very heavy physical demands.

TABLE 1.13: HEALTHCARE UTILIZATION FOR OVERUSE INJURIES, WOMEN

Characteristic	Category	Visits (n)	Total Person days (1000s)	UR [†]	Crude URR	95% CI
PC Quintile	Q1	1,194	42.24	28.3	1.44	(1.31, 1.59)
	Q2	1,038	39.65	26.2	1.33	(1.21, 1.48)
	Q3	937	34.16	27.4	1.40	(1.26, 1.55)
	Q4	913	34.13	26.7	1.36	(1.23, 1.51)
	Q5 (REF)	595	30.32	19.6	1.00	-
Race	White (REF)	3,247	119.89	27.1	1.00	-
	Black	986	41.83	23.6	0.87	(0.81, 0.93)
	Other	444	18.77	23.6	0.87	(0.79, 0.96)
Age at Accession	17-20 (REF)	2,026	88.52	22.9	1.00	-
	21-25	1,657	58.91	28.1	1.23	(1.15, 1.31)
	> 25	994	33.08	30.0	1.31	(1.22, 1.42)
BMI	Underweight	85	3.42	24.9	0.96	(0.77, 1.19)
	Normal (REF)	2,744	106.10	25.9	1.00	-
	Overweight	1,801	68.75	26.2	1.01	(0.95, 1.07)
	Obese	47	2.23	21.1	0.82	(0.61, 1.09)
Medical Status	Fully Qualified (REF)	4,400	171.26	25.7	1.00	-
	Medically Waived	277	9.24	30.0	1.17	(1.03, 1.32)
PDR for	Light/Medium	562	22.72	24.7	0.95	(0.86, 1.04)
MOS	Moderately Heavy	798	31.25	25.5	0.98	(0.90, 1.06)
	Heavy	1,088	41.35	26.3	1.01	(0.93, 1.08)
	Very Heavy (REF)	1,921	73.51	26.1	1.00	-
	N/A or Missing	308	11.67	26.4	1.01	(0.90, 1.14)

PDR: Physical Demands Rating; PC: Physical Conditioning; Q: Quintile; BMI: Body Mass Index; UR: Utilization Rate; URR: Utilization Rate Ratio; CI: Confidence Interval; REF: Referent Group

[†]Rate of visits per 1,000 person days

The adjusted utilization rate ratios (aURR) for each sex are shown in Table 1.14. When adjusted for all other covariates, men in the lowest physical conditioning quintile still had higher injury-related healthcare utilization compared to higher scorers (aURR = 1.18, 95% CI: 1.11, 1.26). The difference among utilization by physical conditioning quintile among women scorers was much more pronounced. Women in the lowest quintile had 45% more injury-related healthcare visits compared to the highest scorers (aURR = 1.45, 95% CI: 1.31, 1.60). Injury-related utilization was, by far, the lowest among high scoring women with an injury.

Whites consistently had higher rates of injury-related healthcare visits in both sexes. Utilization increased linearly with increasing age group. Men in the >25 age group had 33% more utilization (aURR = 1.33, 95% CI: 1.27, 1.40) and women in the >25 age group had 31% more utilization (aURR = 1.31, 95% CI: 1.22, 1.42). Among men, obese enlistees had higher utilization (aURR = 1.15, 95% CI: 1.09, 1.21); however, among women there were no significant differences in utilization rates by BMI category. Medical status was not significant for either men or women in the adjusted models. Among men, enlistees assigned to an MOS with a light or medium physical demand rating had higher rates of utilization compared to those in the very heavy PDR category (aURR = 1.15, 95% CI: 1.05, 1.27). There were no differences in utilization rates by PDR among women.

TABLE 1.14: ADJUSTED UTILIZATION RATE RATIOS FOR HEALTHCARE RELATED TO OVERUSE INJURIES IN THE FIRST SIX MONTHS OF SERVICE, BY SEX

Characteristic	Category	Men		Women	
		aURR	95% CI	aURR	95% CI
PC Dimension Quintile	Q1	1.18	(1.11, 1.26)	1.45	(1.31, 1.60)
	Q2	1.13	(1.06, 1.21)	1.39	(1.25, 1.53)
	Q3	1.08	(1.01, 1.15)	1.41	(1.28, 1.57)
	Q4	1.10	(1.03, 1.18)	1.40	(1.26, 1.55)
	Q5 (REF)	1.00	-	1.00	-
Race	White (REF)	1.00	-	1.00	-
	Black	0.91	(0.85, 0.97)	0.85	(0.79, 0.91)
	Other	0.97	(0.91, 1.03)	0.83	(0.75, 0.92)
Age at Accession	17-20 (REF)	1.00	-	1.00	-
	21-25	1.04	(1.00, 1.09)	1.22	(1.15, 1.31)
	> 25	1.33	(1.27, 1.40)	1.31	(1.22, 1.42)
BMI	Underweight	0.98	(0.83, 1.17)	0.97	(0.78, 1.21)
	Normal (REF)	1.00	-	1.00	-
	Overweight	1.06	(1.01, 1.10)	0.99	(0.94, 1.06)
	Obese	1.15	(1.09, 1.21)	0.80	(0.60, 1.07)
Medical Status	Fully Qualified (REF)	1.00	-	1.00	-
	Medically Waived	1.03	(0.96, 1.11)	1.12	(0.99, 1.26)
PDR	Light/Medium	1.15	(1.05, 1.27)	0.95	(0.87, 1.05)
	Moderately Heavy	1.01	(0.95, 1.07)	0.97	(0.89, 1.05)
	Heavy	0.85	(0.80, 0.91)	0.99	(0.92, 1.07)
	Very Heavy (REF)	1.00	-	1.00	-
	N/A or Missing	0.98	(0.91, 1.06)	0.97	(0.86, 1.10)

PDR: Physical Demands Rating; PC: Physical Conditioning; Q: Quintile; BMI: Body Mass Index; aURR: Adjusted Utilization Rate Ratio; CI: Confidence Interval; REF: Referent Group

Discussion

In this study, we showed that TAPAS physical conditioning scores are associated with different rates of injury-related healthcare utilization, among those who have experienced an injury. Low scorers on the TAPAS physical conditioning dimension are not only at increased risk for overuse injuries, as previously described, but also low scorers with an overuse injury have higher rates of injury-related healthcare utilization. Among the other covariates, older enlistees had more utilization for both men and women, and obese men or men in the light/medium PDR category had more utilization.

Previous work by AMSARA has shown that men who failed a pre-accession fitness screen had 16% more injury-related utilization compared to those who passed the screen [12]. Our findings confirm that less physically active recruits are more likely to use more injury-related healthcare. This increase in utilization may reflect more serious injuries or re-injury in these recruits.

This further supports that using the physical conditioning dimension of TAPAS to measure self-reported perceptions of physical activity levels may be useful in assessing an applicant's fitness for service in the Army. If low scoring individuals are more likely to get injured and also suffer more injuries or more severe injuries requiring more care, there may be the case to be made that the physical conditioning dimension could be used as a pre-accession screen to identify recruits in need of improving their physical fitness prior to joining the military. And since TAPAS is already automated on the ASVAB system for all military applicants, this could easily be implemented as a fitness screen.

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Descriptive Statistics for Enlisted Service Applicants and Accessions

The characteristics of the source populations applying for enlisted service in the active, reserve, and National Guard components of the military are described from fiscal year 2008 to fiscal year 2013. The characteristics of the accessed populations are compared and subsequent attritions are shown. Individuals identified as having prior service in any U.S. military component are excluded. An *applicant* is the individual who presents to a Military Entrance Processing Station (MEPS) for evaluation for acceptance into military service. An enlistee *accession* is the individual who has signed his or her oath of enlistment.

Except where otherwise noted, the following conventions apply:

- All references to year refer to fiscal year (FY).
- The “Accessions” shown in the following tables are from among the “Applicants” shown in the relevant preceding column. For example, columns showing fiscal year 2013 accessions are summarizing accessions only among individuals who applied for service in fiscal year 2013. Notation is made when complete follow-up is not available.
- Only data through fiscal year 2013 are included. Therefore, numbers and percentages gained (i.e. accessions) among applicants in 2013 refer only to those gained through September 30, 2013.
- To derive percentages and rates, data sets were merged at the individual level by Social Security Number (SSN). For example, in determining the percentage of individuals gained in 2013 who received a discharge, only discharges with a SSN matching a 2013 accession record SSN were included.
- Under the subsections titled “Active Component Applicants and Accessions,” “Reserve Component Applicants and Accessions,” “National Guard Component Applicants and Accessions,” and “Medical Waivers,” education level and age were obtained at the time of MEPS application because MEPS data are the only source of these variables for applicants. For subsections titled “Hospitalizations,” “Attrition,” “EPTS Discharges,” and “Disability Discharges with an Accession Record,” age, education level, and Armed Forces Qualification Test (AFQT) score at time of accession are used. Under the Delayed Entry Program, the application process can occur up to 2 years before the actual accession takes place.
- Temporary medical disqualifications are for conditions that can be corrected, such as being overweight or recently using marijuana; these individuals may enter the military without a

waiver after the condition is corrected. Permanent medical disqualifications are for all other disqualifying conditions described in DoD Instruction 6130.03.

- Beginning in the FY 2008 Annual report, the way International Classification of Diseases, 9th revision (ICD-9) codes are summarized was revised in order to establish more uniform granularity over the range of ICD-9 codes reported for MEPS disqualification and waivers. This was done by selecting a subset of codes based on expert opinion that were exceptionally broad and reporting them to four digits rather than three (summarized in Table 2.1). For example, 493 is specific to asthma whereas 733 denotes a diverse array of bone and cartilage disorders, which include osteoporosis, pathologic fractures, bone cysts, and aseptic necrosis. Please note, when a majority of codes examined out to the fourth digit do not have a fourth digit (either due to insufficient information at time of coding or to errors) it is possible to have a three-digit code appear in the leading 20 medical conditions tables, even though the raw codes were examined out to the fourth digit. Such codes are treated as a distinct category and are in no case to be considered a parent term if a more specific code is present. For example, the ICD-9 groups specified by 785 and 785.0 are mutually exclusive categories and the latter is not a subset of the former.

TABLE 2.1 LIST OF ICD-9 CODING GROUPS SUMMARIZED TO THE FOURTH DIGIT

ICD-9[†]	Condition
305	Nondependent abuse of drugs
306	Physiological malfunction arising from mental factors
307	Special symptoms or syndromes, not elsewhere classified
718	Other derangement of joint
719	Other and unspecified disorders of joint
724	Other and unspecified disorders of back
726	Peripheral enthesopathies and allied syndromes
733	Other disorders of bone and cartilage
746	Other congenital anomalies of heart
754	Certain congenital musculoskeletal deformities
756	Other congenital musculoskeletal anomalies
780	General symptoms
783	Symptoms concerning nutrition, metabolism, and development
784	Symptoms involving head and neck
785	Symptoms involving cardiovascular system
795	Other and nonspecific abnormal cytological, histological, immunological and DNA test findings
796	Other nonspecific abnormal findings

[†] Differences in the level of coding specificity (3-digit vs. 4-digit) over time can lead to misleadingly large disparities in the incidence estimates for particular disease or condition categories when comparing current year data to the previous 5-year period.

Summary Statistics for Applicants and Accessions for Enlisted Service

Tables 2.2 through 2.4 show the rates of medical disqualification, waiver application, waiver approval, and accession of the enlisted applicant population between 2008 and 2013 by fiscal year of physical exam. Applicants are restricted to Army, Navy, Marine Corps, and Air Force applicants and rates are stratified by component. Applicants may appear in more than one table if they applied to more than one component. However, for each component, each applicant is only counted once. Applicants were considered disqualified if they had an International Classification of Diseases, 9th revision (ICD-9) or other medical failure (OMF) code listed in their US Military Entrance Processing Command Integrated Resource System (USMIRS) application record. Waiver applicants and approvals were included if an individual applied for or was approved for a waiver in the 730 days following their physical exam. Only waiver applications and approvals from the service applied to were included. Similarly, applicants were counted as accessions if they accessed into the same service they applied and the accession date followed the physical exam date.

Medical disqualification (DQ), waiver, and accession rates are shown in Table 2.2 for enlisted active component applicants, by year, for all services. Overall, about 20% of applicants received either a temporary or permanent medical disqualification. The proportion of active component applicants with a medical disqualification has remained relatively consistent in the period from 2008 to 2013. About 8% of active component applicants apply for a medical waiver and roughly 6% of active component applicants are approved for a medical waiver. In the period from 2008 to 2013 the rate of waiver application has increased slightly but no clear trend in the rate of waiver approval is evident. The accession rate of active component applicants has remained relatively consistent throughout the time period from 2008 to 2012 with between 72% and 75% of applicants accessing. Accession rates of 2013 applicants are not reported due to insufficient follow up time.

TABLE 2.2: DISQUALIFICATION, WAIVER, AND ACCESSION RATES FOR ENLISTED ACTIVE COMPONENT APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION BY YEAR: ALL SERVICES

	Applicant (n)	DQ (n)	DQ (%)	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve (n)	Waiver Approve (%)	Access (n)	Access (%)
2008	238,410	49,347	20.7	17,799	7.5	13,431	5.6	176,745	74.1
2009	260,862	52,812	20.2	19,284	7.4	14,216	5.4	188,403	72.2
2010	216,242	41,135	19.0	16,338	7.6	11,197	5.2	157,617	72.9
2011	202,328	38,137	18.8	16,036	7.9	10,932	5.4	149,467	73.9
2012	200,971	37,656	18.7	17,772	8.8	12,595	6.3	149,455	74.4
2013*	201,894	38,485	19.1	16,101	8.0	11,715	5.8	-	-
Total	1,320,707	257,572	19.5	103,330	7.8	74,086	5.6	821,687	73.4

DQ: Disqualifications; Access: Accessions

*Accessions among 2013 applicants not calculated due to lack of sufficient follow up time.

Table 2.3 shows medical disqualification, waiver, and accession rates for enlisted reserve component applicants by year of physical exam for all services. Overall, about 20% of applicants received either a temporary or permanent medical disqualification. The proportion of reserve component applicants with a medical disqualification has decreased slightly during this time period from 22% in 2008 to 19% in 2013. About 7% of active component applicants apply for a medical waiver and roughly 5% of active component applicants are approved for a medical waiver. In the period from 2008 to 2013 no clear trend in the rate of waiver application or approval is evident for reserve component applicants. The accession rate of reserve component applicants has remained relatively consistent throughout the time period from 2008 to 2011 with between 68% and 72% of applicants accessing. In 2012, the accession rate among reserve applicants was lower than observed in the period from 2008 to 2011. Accession rates of 2013 applicants are not reported due to insufficient follow up time.

TABLE 2.3: DISQUALIFICATION, WAIVER, AND ACCESSION RATES FOR ENLISTED RESERVE COMPONENT APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION BY YEAR: ALL SERVICES

	Applicant (n)	DQ (n)	DQ (%)	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve (n)	Waiver Approve (%)	Access (n)	Access (%)
2008	44,429	9,928	22.3	3,596	8.1	2,758	6.2	31,901	71.8
2009	47,448	10,368	21.9	3,576	7.5	2,709	5.7	33,249	70.1
2010	35,565	6,968	19.6	2,272	6.4	1,649	4.6	24,128	67.8
2011	37,912	7,335	19.3	2,545	6.7	1,795	4.7	26,649	70.3
2012	33,947	6,606	19.5	2,594	7.6	1,892	5.6	21,101	62.2
2013*	32,745	6,255	19.1	2,300	7.0	1,780	5.4	-	-
Total	232,046	47,460	20.5	16,883	7.3	12,583	5.4	137,028	68.8

DQ: Disqualifications; Access: Accessions

*Accessions among 2013 applicants not calculated due to lack of sufficient follow up time.

Table 2.4 shows medical disqualification and accession rates for enlisted National Guard applicants by year of physical exam for all services. Overall, about 24% of applicants received either a temporary or permanent medical disqualification. The proportion of National Guard

applicants with a medical disqualification has decreased during this time period from 27% in 2008 to 22% in 2013. The accession rate of National Guard component applicants has remained relatively consistent throughout the time period from 2008 to 2011 with between 68% and 72% of applicants accessing. In 2012, the accession rate among National Guard applicants was lower than observed in the period from 2008 to 2011. Accession rates of 2013 applicants are not reported due to insufficient follow up time. Medical waiver data are not available for National Guard applicants.

TABLE 2.4: DISQUALIFICATION, WAIVER, AND ACCESSION RATES FOR ENLISTED NATIONAL GUARD COMPONENT APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION BY YEAR: ARMY AND AIR FORCE

	Applicant (n)	DQ (n)	DQ (%)	Access (n)	Access (%)
2008	63,765	17,126	26.9	49,751	78.0
2009	58,747	15,003	25.5	43,553	74.1
2010	55,108	13,105	23.8	42,093	76.4
2011	46,734	10,328	22.1	36,227	77.5
2012	51,978	11,066	21.3	38,474	74.0
2013*	53,185	11,658	21.9	-	-
Total	329,517	78,286	23.8	210,098	76.0

DQ: Disqualifications; Access: Accessions

*Accessions among 2013 applicants not calculated due to lack of sufficient follow up time.

Tables 2.5 through 2.7 show the rates of medical disqualification, waiver approval, existed prior to service (EPTS) discharge data from training sites, hospitalization, disability discharge, and attrition of the enlisted accessed population between 2008 and 2013 by fiscal year of accession. Accessions are restricted to Army, Navy, Marine Corps, and Air Force applicants and rates are stratified by component. Accessions were considered disqualified if they had an ICD-9 or OMF code listed in their MEPS application record. Waiver approvals were included if an individual was approved for a waiver in the 730 days following their physical exam. Only waivers from the service accessed to were included. Similarly, EPTS discharges were restricted to discharges that occurred in the first 180 days of service from the service and component of accession. Hospitalization, disability, and attrition were restricted to events that occurred in the first 365 days of service where the service and component at time of event (i.e. hospitalization, disability, or attrition) matched the service and component at accession.

Medical disqualification, waiver, EPTS discharge, hospitalization, disability discharge, and attrition rates are shown in Table 2.5 for enlisted active component accessions by year for all services. Overall, about 13% of accessions received either a temporary or permanent medical disqualification. The proportion of accessions with a history of either a permanent or temporary medical disqualification has decreased slight from 2008 to 2013. Waiver approval rates were about 6% overall in the active component accessed population and appear to be increasing in 2013 after remaining relative stable in the period from 2008 to 2012. EPTS discharges occurred in about 2% of active component accessions and have varied from 2-3% from 2008 to 2012.

Overall, about 3% of active component accessions are hospitalized in the first year of service; the proportion of active component accession hospitalized in the first year of service has decreased between 2008 and 2013. Less than 0.5% of active component accessions are disability discharged in the first year of service and the rate of disability discharge in the first year appear to be decreasing in the period from 2008 to 2012. Attrition in the first year of service has slightly decreased over time. In 2008 14% of active component accessions were discharged in the first year of service for any reason; by 2012 this number had decreased to 12%.

Table 2.6 shows medical disqualification, waiver, EPTS discharge, hospitalization, disability discharge, and attrition rates for enlisted reserve component accessions by year of accession. However, attrition rates presented for enlisted reserve accessions are likely underestimated as the majority of discharges from enlisted reserve service are accompanied by an ISC that indicates the reason for separation was unknown and thus not considered attrition by AMSARA. Overall, about 14% of applicants received either a temporary or permanent medical disqualification. The proportion of reserve component applicants with a medical disqualification has decreased slightly during this time period from 16% in 2008 to 13% in 2013. About 5% of reserve component accessions access with a medical waiver. The rate of waivers in the accessed reserve population was relatively consistent before increasing slightly in 2013. Overall EPTS rates in reserve component accessions were less than 1% and were relatively consistent over time prior to a decrease in 2012. Hospitalization in the first year of service occurred in about 1% of reserve component accessions and has varied between 0.9% and 1.6% of total reserve accessions. Hospitalization rate in the first year of reserve service are likely underestimated relative to the active component because hospitalizations outside of Military Treatment Facilities are not included in this report. Disability discharge in the first year of service occurred less than 0.5% of reserve accessions and has generally decreased over time. Attrition in the first year of service in the reserve component was about 4% regardless of year of accession.

Table 2.7 shows medical disqualification, waiver, EPTS discharge, hospitalization, disability discharge, and attrition rates for enlisted National Guard component accessions by year of accession. However, attrition rates presented for enlisted reserve accessions are likely underestimated as the majority of discharges from enlisted reserve service are accompanied by an ISC that indicates the reason for separation was unknown and thus not considered attrition by AMSARA. Medical waiver data are not available for National Guard accessions. Overall, about 15% of applicants received either a temporary or permanent medical disqualification. The proportion of National Guard applicants with a medical disqualification has decreased slightly during this time period from 17% in 2008 to 14% in 2013. Overall EPTS rates in National Guard accessions were less than 2% and were relatively consistent over time prior to a decrease in 2012. Hospitalization in the first year of service occurred in about 1% of reserve component accessions and has varied between 0.9% and 1.5% of total reserve accessions. Hospitalization rate in the first year of reserve service are likely underestimated relative to the active component because hospitalizations outside of Military Treatment Facilities are not included in this report.

Disability discharge in the first year of service occurred less than 0.2% of reserve accessions and has generally decreased over time. Attrition in the first year of service in the reserve component was about less than 0.5% regardless of year of accession.

TABLE 2.5: DISQUALIFICATION, WAIVER, EPTS, HOSPITALIZATION, DISABILITY, AND ATTRITION RATES AMONG ENLISTED ACTIVE COMPONENT ACCESSIONS BY YEAR:
ALL SERVICES

	Accession (n)	DQ (n)	DQ (%)	Waiver Approved (n)	Waiver Approved (%)	EPTS Discharge (n)	EPTS Discharge (%)	Hosp (n) [†]	Hosp (%)	Disability Discharge (n) [†]	Disability Discharge (%)	Attrition (n) [†]	Attrition (%)
2008	162,700	25,303	15.6	10,578	6.5	5,003	3.1	5,578	3.4	1,044	0.64	22,098	13.6
2009	161,061	22,479	14.0	9,269	5.8	3,761	2.3	4,742	2.9	787	0.49	20,203	12.5
2010	159,745	21,284	13.3	9,293	5.8	3,792	2.4	4,286	2.7	573	0.36	17,747	11.1
2011	152,658	18,755	12.3	8,805	5.8	4,143	2.7	4,097	2.7	454	0.30	16,759	11.0
2012	155,658	18,734	12.0	9,627	6.2	3,348	2.2	3,789	2.4	341	0.22	18,114	11.6
2013*	165,905	21,989	13.3	13,030	7.9	-	-	2,113	1.3	122	0.07	-	-
Total	957,727	128,544	13.4	60,602	6.3	20,047	2.5	24,605	2.6	3,321	0.35	94,921	12.0

DQ: Disqualifications; EPTS: Existed Prior to Service; Hosp: Hospitalizations

*EPTS and Attrition not calculated for 2013 accessions due to lack of sufficient follow up time.

[†]In the first 365 days of service.

TABLE 2.6: DISQUALIFICATION, WAIVER, EPTS, HOSPITALIZATION, DISABILITY, AND ATTRITION RATES AMONG ENLISTED RESERVE COMPONENT ACCESSIONS BY YEAR:
ALL SERVICES

	Accession (n)	DQ (n)	DQ (%)	Waiver Approved (n)	Waiver Approved (%)	EPTS Discharge (n)	EPTS Discharge (%)	Hosp (n) [†]	Hosp (%)	Disability Discharge (n) [†]	Disability Discharge (%)	Attrition (n) [†]	Attrition (%)
2008	35,449	5,673	16.0	2,004	5.65	490	1.38	555	1.57	108	0.30	1,459	4.1
2009	34,969	5,244	15.0	1,618	4.63	426	1.22	406	1.16	69	0.20	1,475	4.2
2010	28,132	3,604	12.8	1,227	4.36	404	1.44	240	0.85	52	0.18	1,318	4.7
2011	30,305	3,686	12.2	1,407	4.64	450	1.48	495	1.63	42	0.14	1,253	4.1
2012	24,150	3,056	12.7	1,183	4.90	162	0.67	361	1.49	18	0.07	1,028	4.3
2013*	21,023	2,681	12.8	1,275	6.06	-	-	162	0.77	1	<0.1	-	-
Total	174,028	23,944	13.8	8,714	5.01	1,932	1.3	2,219	1.28	290	0.17	6,533	4.3

DQ: Disqualifications; EPTS: Existed Prior to Service; Hosp: Hospitalizations

*EPTS and Attrition not calculated for 2013 accessions due to lack of sufficient follow up time.

[†]In the first 365 days of service.

TABLE 2.7: DISQUALIFICATION, WAIVER, EPTS, HOSPITALIZATION, DISABILITY, AND ATTRITION RATES AMONG ENLISTED NATIONAL GUARD COMPONENT ACCESSIONS BY YEAR: ARMY NATIONAL GUARD AND AIR NATIONAL GUARD

	Accession (n)	DQ (n)	DQ (%)	EPTS Discharge (n)	EPTS Discharge (%)	Hosp (n) [†]	Hosp (%)	Disability Discharge (n) [†]	Disability Discharge (%)	Attrition (n) [†]	Attrition (%)
2008	53,479	9,038	16.9	601	1.12	706	1.32	144	0.27	183	0.34
2009	47,136	7,466	15.8	536	1.14	412	0.87	101	0.21	172	0.36
2010	46,027	6,643	14.4	744	1.62	371	0.81	86	0.19	112	0.24
2011	40,109	5,372	13.4	669	1.67	477	1.19	47	0.12	115	0.29
2012	41,988	5,382	12.8	290	0.69	455	1.08	14	0.03	82	0.20
2013*	28,047	3,930	14.0	-	-	162	0.58	2	0.01	-	-
Total	256,786	37,831	14.7	2,840	1.2	2,583	1.01	394	0.15	664	0.29

DQ: Disqualifications; EPTS: Existed Prior to Service; Hosp: Hospitalizations

*EPTS and Attrition not calculated for 2013 accessions due to lack of sufficient follow up time.

[†]In the first 365 days of service.

Applicants and Accessions

Active Component Applicants and Accessions

Tables 2.8 and 2.9 describe the population of applicants who received a medical examination and subsequent accessions for active component enlisted service in the Army, Navy, Marine Corps and Air Force. Individuals were counted once, either in the component and service in which they access, or for applicants who did not access, in the service and component applied to on their most recent date of application. Applicants for enlisted service who subsequently accessed as officers (as indicated by a pay grade of O1-O6), were included as applicants, but excluded from accessions.

Table 2.8 shows the number of applicants for enlisted service by year for 2008-2013 and the associated accession counts and rates within one year and within two years following application and overall accession rate. Regulations state that accessions must occur within one year of application, although it is fairly common for applicants to request and to be granted a one-year extension. Due to the lack of full two-year and overall follow-up data for 2012 applicants and one-year, two-year and overall follow-up for 2013 applicants, the corresponding accession rates were underestimated (see note below Table 2.8). The accession rates within one and two years of application were lowest for 2009-2010 and highest during 2008 and 2012.

TABLE 2.8: ACCESSION RATE FOR ENLISTED ACTIVE COMPONENT APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2008-2013: ALL SERVICES

Year of exam	Applicants (n)	Within 1 year of application (n)	Within 1 year of application (%)	Within 2 years of application (n)	Within 2 years of application (%)	Total Accessed (n)	Overall Accession (%)
2008	238,410	164,731	69.1	175,864	73.8	176,745	74.1
2009	260,862	171,799	65.9	187,650	71.9	188,403	72.2
2010	216,242	142,422	65.9	157,245	72.7	157,617	72.9
2011	202,328	136,590	67.5	149,290	73.8	149,467	73.9
2012	200,971	140,783	70.1	149,455	74.4 [†]	149,455	74.4 [†]
2013	201,894	85,142	42.2 [†]	85,142	42.2 [†]	85,142	42.2 [†]
Total Applicants	1,320,707	841,467		904,646		906,829	

[†]The proportion of applicants who accessed was underestimated due to lack of sufficient follow-up data since only accessions through 2013 are reported in the above table.

Table 2.9 shows demographic characteristics (at time of application) and accession rates for the applicant pools in 2008-2012 and 2013. Most applicants in 2013 were male (81.6%), aged 17-20 years (69.0%), and white (70.5%). In 2013, over two-third of applicants had a high school diploma (67.7%) and scored in the 50th percentile or higher for Armed Forces Qualification Test (AFQT) score (71.2%). The percentage of fully qualified applicants in 2013 was similar to that observed in 2008-2012 (80.9% and 80.4% respectively). The distribution of gender among

applicants and accessions in 2013 was similar to that observed in 2008-2012. The percentage of applicants between the ages of 17 and 20 was slightly larger in 2013 than in 2008-2012 (69.0% and 65.7%, respectively). In 2013, the percentage of white applicants and accessions was smaller than in previous years (70.5% versus 73.7% in 2008-2012 and 71.0% versus 74.8% in 2008-2012, respectively). Nearly one-fifth (19.3%) of applicants in 2013 had not completed high school at the time of application compared to less than one-seventh (13.3%) the previous five years; most were in the Delayed Entry Program (DEP) and completed high school prior to accession. The distribution of AFQT score among applicants and accessions in 2013 was similar to that observed in 2008-2012. The percentage of temporary disqualifications in 2013 was 3.8%, lower than 6.1% observed in 2008-2012. Demographic distributions of accessions largely reflect the applicant population with regard to gender, age, and race. Graduation from high school prior to accession among applicants who were high school seniors at the time of application accounts for much of the difference in education noted when comparing 2013 applicants and accessions. The observed difference in proportions between fully qualified accessions (88.7%) and applicants (80.9%) in 2013 corresponded to a drop in both permanent medically disqualified accessions (8.8%) and temporary medically disqualified accessions (2.5%) relative to applicants from the same year (15.3% and 3.8% respectively).

TABLE 2.9: DEMOGRAPHIC CHARACTERISTICS OF ENLISTED ACTIVE COMPONENT APPLICANTS WHO RECEIVED A MEDICAL EXAMINATION IN 2008-2012 VS. 2013: ALL SERVICES

	2008 – 2012				2013			
	Applicants		Accessions		Applicants		Accessions	
	n	%	n	%	n	%	n	%
Sex*								
Male	917,757	82.1	687,585	83.7	164,598	81.6	70,096	82.3
Female	200,734	17.9	134,101	16.3	37,100	18.4	15,046	17.7
Age Group at MEPS*								
17 – 20	734,802	65.7	560,029	68.2	139,264	69.0	58,660	68.9
21 – 25	289,233	25.9	205,361	25.0	49,146	24.3	21,413	25.1
> 25	94,762	8.5	56,291	6.9	13,482	6.7	5,069	6.0
Race*								
White	824,021	73.7	615,011	74.8	142,308	70.5	60,416	71.0
Black	177,146	15.8	131,518	16.0	37,412	18.5	16,966	19.9
Other	117,646	10.5	75,158	9.1	22,174	11.0	7,760	9.1
Education*								
Below HS Senior**	10,872	1.0	6,462	0.8	1,173	0.6	38	<0.1
HS Senior	138,020	12.3	85,264	10.4	37,714	18.7	6,992	8.2
HS Diploma	815,324	72.9	628,728	76.5	136,740	67.7	67,876	79.7
Some College	74,898	6.7	56,272	6.8	10,771	5.3	5,255	6.2
Bachelor's and above	79,699	7.1	44,961	5.5	15,496	7.7	4,981	5.9
AFQT Score								
93 – 99	75,450	6.7	58,407	7.1	12,524	6.2	5,234	6.1
65 – 92	425,357	38.0	327,217	39.8	75,705	37.5	32,642	38.3
50 – 64	294,358	26.3	222,218	27.0	55,585	27.5	24,132	28.3
30 – 49	272,211	24.3	197,625	24.1	48,690	24.1	22,351	26.3
11 – 29	14,650	1.3	4,524	0.6	2,358	1.2	55	0.1
< 11†	275	<0.1	28	<0.1	40	<0.1	1	<0.1
Missing	36,512	3.3	11,668	1.4	6,992	3.5	727	0.9
Medical Status								
Fully Qualified	899,726	80.4	711,354	86.6	163,409	80.9	75,503	88.7
Permanent DQ	151,206	13.5	72,957	8.9	30,872	15.3	7,531	8.8
Temporary DQ	67,881	6.1	37,376	4.5	7,613	3.8	2,108	2.5
Total	1,118,813		821,687		201,894		85,142	

MEPS: Military Entrance Processing Station; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification

* Individuals with missing values for demographic variables are included in the total.

**Encompasses the following: 1) those pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc; 2) those not attending high school and who are neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school and is not yet a senior.

† Individuals scoring in the 10 percentile or lower are prohibited from applying, therefore, the observed accessions most likely reflect data capture errors.

Reserve Component Applicants and Accessions

Tables 2.10 and 2.11 describe the characteristics of applicants for the enlisted reserve component of the Army, Navy, Marines, and Air Force. Data on applicants who underwent medical examinations at any Military Entrance Processing Station (MEPS) are shown for the period from 2008 to 2012 in aggregate and separately for 2013. These results include only civilians with no prior service applying for the reserve component and do not include direct accessions from active component military. Individuals were counted only once, either in the component and service in which they access, or for applicants who did not access, in the service and component applied to on their most recent day of application. Reserve applicants who subsequently accessed as officers (as indicated by a pay grade at gain of O1-O6), were included as applicants, but excluded from accessions.

Table 2.10 shows the number of applicants for the reserve component by year for 2008-2013 and the associated accession counts and rates within one year and two years following application and overall accession. Regulations state that accessions must occur within one year of application, although it is fairly common for applicants to request and to be granted a one-year extension. Due to the lack of full two-year and overall follow-up data for 2012 applicants and one-year, two-year and overall follow-up for 2013 applicants, the corresponding accession rates were underestimated (see note below Table 2.10). The accession rates of Reserve applicants within one year of application were lowest during 2012 (60.2%) and highest in 2008 (69.6%). Accession rates within two years of application were lowest during 2010 (67.8%) and highest in 2008 (71.8%).

TABLE 2.10: ACCESSION RATE FOR ENLISTED RESERVE COMPONENT APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2008-2013: ALL SERVICES

Year of exam	Applicants (n)	Within 1 year of application (n)	Within 1 year of application (%)	Within 2 years of application (n)	Within 2 years of application (%)	Total Accessed (n)	Overall Accession (%)
2008	44,429	30,944	69.6	31,886	71.8	31,901	71.8
2009	47,448	32,087	67.6	33,240	70.1	33,249	70.1
2010	35,565	23,104	65.0	24,124	67.8	24,128	67.8
2011	37,912	25,902	68.3	26,634	70.3	26,649	70.3
2012	33,947	20,424	60.2	21,101	62.2 [†]	21,101	62.2 [†]
2013	32,745	16,641	50.8 [†]	16,641	50.8 [†]	16,641	50.8 [†]
Total Applicants	232,046	149,102		153,626		153,669	

[†]The proportion of applicants who accessed was underestimated due to lack of sufficient follow-up data since only accessions through 2013 are reported in the above table.

Table 2.11 describes the demographic characteristics of reserve component applicants at MEPS. Most applicants in 2013 were male (76.3%), between the ages of 17 and 20 (68.0%), and white (67.2%, excluding applicants who declined to provide their racial status and those with missing records). In 2013, 62.9% of applicants had a high school diploma and over two-third scored in the 50th to 99nd percentile for AFQT score (67.8%). The demographic profile of reserve component applicants in 2013 was largely consistent with the demographic profile of accessions over the same time periods. The proportion of applicants in 2013 who were classified as having an education below high school senior was lower than the previous five years (3.1% versus 6.0% in 2008-2012). These decreases in the percent of applicants with education below high school senior corresponded to a rise in the percentage of applicants with a high school diploma in 2013 (20.3%) relative to the previous five years (14.6%). The percentage of applicants with some college in 2013 was slightly lower to that observed in 2008-2012 (7.4% and 9.3% respectively). The distribution of educational categories among accessions reflected the applicant population. The distribution of AFQT score among applicants and accessions in 2013 was similar to that observed in 2008-2012. The percentage of fully qualified applicants in 2013 is similar to the percentages observed from 2008 to 2012 (79.3% and 80.9% respectively). In 2013 (4.0%) of applicants were considered temporary medically qualified compared to (6.7%) from the previous five years; this decrease was consistent with a decrease in the percent of accessions who were temporarily disqualified over the same time periods (2.9%) relative to the previous five years (5.2%). The percentage of fully qualified accessions in 2013 was similar to that observed in 2008-2012 (88.0% and 86.3% respectively).

TABLE 2.11: DEMOGRAPHIC CHARACTERISTICS OF ENLISTED RESERVE COMPONENT APPLICANTS WHO RECEIVED A MEDICAL EXAMINATION IN 2008-2012 VS. 2013: ALL SERVICES

	2008 – 2012				2013			
	Applicants		Accessions		Applicants		Accessions	
	n	%	n	%	n	%	n	%
Sex*								
Male	151,756	76.2	105,166	76.7	24,983	76.3	12,687	76.2
Female	47,487	23.8	31,862	23.3	7,755	23.7	3,954	23.8
Age Group at MEPS*								
17 – 20	127,414	63.9	91,102	66.5	22,260	68.0	11,652	70.0
21 – 25	46,156	23.2	30,460	22.2	7,125	21.8	3,469	20.8
> 25	25,730	12.9	15,465	11.3	3,360	10.3	1,520	9.1
Race*								
White	142,449	71.5	101,292	73.9	22,000	67.2	11,299	67.9
Black	39,867	20.0	26,568	19.4	7,861	24.0	4,084	24.5
Other	16,985	8.5	9,168	6.7	2,884	8.8	1,258	7.6
Education*								
Below HS Senior**	12,024	6.0	10,613	7.7	1,021	3.1	614	3.7
HS Senior	29,124	14.6	21,897	16.0	6,636	20.3	3,407	20.5
HS Diploma	127,099	63.8	84,648	61.8	20,594	62.9	10,455	62.8
Some College	18,528	9.3	12,629	9.2	2,409	7.4	1,256	7.5
Bachelor's and above	12,526	6.3	7,241	5.3	2,085	6.4	909	5.5
AFQT Score*								
93 – 99	12,524	6.3	8,524	6.2	1,853	5.7	922	5.5
65 – 92	72,013	36.1	51,025	37.2	11,991	36.6	6,340	38.1
50 – 64	50,673	25.4	35,350	25.8	8,362	25.5	4,242	25.5
30 – 49	58,264	29.2	40,400	29.5	9,552	29.2	4,943	29.7
11 – 29	4,564	2.3	1,435	1.0	730	2.2	179	1.1
< 11†	279	0.1	150	0.1	19	0.1	1	<0.1
Missing	984	0.5	144	0.1	238	0.7	14	0.1
Medical Status								
Fully Qualified	158,096	79.3	118,245	86.3	26,490	80.9	14,638	88.0
Permanent DQ	27,928	14.0	11,675	8.5	4,933	15.1	1,515	9.1
Temporary DQ	13,277	6.7	7,108	5.2	1,322	4.0	488	2.9
Total	199,301		137,028		32,745		16,641	

MEPS: Military Entrance Processing Station; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification

* Individuals with missing values for demographic variables are included in the total.

** Encompasses the following: 1) those pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc; 2) those not attending high school and who are neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school and is not yet a senior.

† Individuals scoring in the 10 percentile or lower are prohibited from applying, therefore, the observed accessions most likely reflect data capture errors.

Army and Air Force National Guard Applicants Accessions

Tables 2.12 and 2.13 describe the characteristics of applicants in the enlisted National Guard of the Army and Air Force. The Navy and Marine Corps do not have a National Guard component. Data on National Guard applicants who received a medical examination at MEPS are shown for the period from 2008 through 2012 (aggregate) and separately for 2013. These results include only civilians with no prior service applying for the National Guard and do not include direct accessions from active component military. Individuals were counted only once, either in the component and service in which they access, or for applicants, in the service and component applied to on their most recent day of application. National Guard applicants who subsequently accessed as officers (as indicated by a pay grade at gain of O1-O6), were included as applicants, but excluded from accessions.

Table 2.12 shows the number of applicants for the National Guard by year for 2008-2013 and the associated accession counts and rates within one year and two years following application and overall accession. Regulations state that accessions must occur within one year of application, although it is fairly common for applicants to request and to be granted a one-year extension. Due to the lack of full two-year and overall follow-up data for 2012 applicants and one-year, two-year and overall follow-up for 2013 applicants, the corresponding accession rates were underestimated (see note below Table 2.12). The accession rates of National Guard applicants within one and two years of application were lowest during 2009 and highest in 2008.

TABLE 2.12: ACCESSION RATE FOR ENLISTED NATIONAL GUARD COMPONENT APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2008-2013: ARMY AND AIR FORCE

Year of exam	Applicants (n)	Within 1 year of application (n)	Within 1 year of application (%)	Within 2 years of application (n)	Within 2 years of application (%)	Total Accessed (n)	Overall Accession (%)
2008	63,765	48,956	76.8	49,737	78.0	49,751	78.0
2009	58,747	42,535	72.4	43,542	74.1	43,553	74.1
2010	55,108	41,243	74.8	42,089	76.4	42,093	76.4
2011	46,734	35,627	76.2	36,220	77.5	36,227	77.5
2012	51,978	38,110	73.3	38,474	74.0 [†]	38,474	74.0 [†]
2013	53,185	26,027	48.9 [†]	26,027	48.9 [†]	26,027	48.9 [†]
Total Applicants	329,517	232,498		236,089		236,125	

[†] The proportion of applicants who accessed was underestimated due to a lack of sufficient follow-up data since only accessions through 2013 are reported in the above table.

Table 2.13 describes the demographics of National Guard applicants for the year 2013 relative to the aggregate demographic characteristics of applicants between 2008 and 2012. In 2013, over three-quarter of applicants were male (75.9%) and two-third were aged 17-20 (67.0%). Most National Guard applicants in 2013 were white (73.4%), whose highest attained education (at application) was a high school diploma (58.9%). The percentage of male applicants in 2013 was 75.9%, slightly lower than 78.8% observed in 2008-2012. In 2013 the percentage of applicants between the ages of 17 and 20 was slightly larger than in 2008-2012 (68.4% and 63.6%, respectively). In 2013, a smaller percentage of whites applied for service than in previous years (73.4% versus 78.7% in 2008-2012) which corresponded to an increase in black applicants (20.7% versus 15.3% in 2008-2012). In 2013, a lower percentage of applicants to National Guard had no high school diploma relative to the previous five year period (7.9% versus 11.1% in 2008-2012). This decrease corresponded to an increase in the percent of applicants who were high school seniors in 2013 (21.5% versus 15.5% in 2008-2012). Most applicants in 2013 were classified as medically qualified (78.1%); the percentage increased slightly from (75.9%) for the previous five years. In 2013 (6.9%) of applicants were considered temporary medically qualified compared to (9.8%) from the previous five years; this decrease was consistent with a decrease in the percent of accessions who were temporarily disqualified over the same time periods (4.2%) relative to the previous five years (7.2%). The percentage of fully qualified accessions in 2013 was similar to that observed in 2008-2012 (87.1% and 85.1% respectively).

TABLE 2.13: DEMOGRAPHIC CHARACTERISTICS OF ENLISTED NATIONAL GUARD APPLICANTS WHO RECEIVED A MEDICAL EXAMINATION IN 2008-2012 VS. 2013: ARMY AND AIR FORCE

	2008 – 2012				2013			
	Applicants		Accessions		Applicants		Accessions	
	n	%	n	%	n	%	n	%
Sex*								
Male	217,738	78.8	166,853	79.4	40,371	75.9	20,006	76.9
Female	58,509	21.2	43,244	20.6	12,795	24.1	6,021	23.1
Age Group at MEPS*								
17 – 20	175,629	63.6	138,658	66.0	36,360	68.4	18,349	70.5
21 – 25	66,091	23.9	48,046	22.9	11,509	21.6	5,396	20.7
> 25	34,604	12.5	23,387	11.1	5,315	10.0	2,282	8.8
Race*								
White	217,392	78.7	171,513	81.6	39,058	73.4	19,684	75.6
Black	42,294	15.3	30,825	14.7	10,991	20.7	5,203	20.0
Other	16,646	6.0	7,760	3.7	3,136	5.9	1,140	4.4
Education*								
Below HS Senior**	30,655	11.1	24,392	11.6	4,217	7.9	2,577	9.9
HS Senior	42,719	15.5	35,957	17.1	11,443	21.5	6,279	24.1
HS Diploma	169,348	61.3	125,552	59.8	31,308	58.9	14,254	54.8
Some College	19,435	7.0	14,562	6.9	3,028	5.7	1,529	5.9
Bachelor's and above	14,175	5.1	9,635	4.6	3,189	6.0	1,388	5.3
AFQT Score*								
93 – 99	15,863	5.7	12,602	6.0	2,922	5.5	1,468	5.6
65 – 92	93,883	34.0	75,853	36.1	17,264	32.5	9,164	35.2
50 – 64	70,638	25.6	55,831	26.6	12,144	22.8	6,211	23.9
30 – 49	85,431	30.9	63,389	30.2	17,535	33.0	8,543	32.8
11 – 29	9,160	3.3	2,223	1.1	3,034	5.7	611	2.3
< 11†	182	0.1	17	<0.1	43	0.1	0	0.0
Missing	1,175	0.4	183	0.1	243	0.5	30	0.1
Medical Status								
Fully Qualified	209,704	75.9	178,894	85.1	41,527	78.1	22,668	87.1
Permanent DQ	39,592	14.3	16,163	7.7	8,011	15.1	2,267	8.7
Temporary DQ	27,036	9.8	15,041	7.2	3,647	6.9	1,092	4.2
Total	276,332		210,098		53,185		26,027	

MEPS: Military Entrance Processing Station; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification

* Individuals with missing values for demographic variables are included in the total.

** Encompasses the following: 1) those pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc; 2) those not attending high school and who are neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school and is not yet a senior.

† Individuals scoring in the 10 percentile or lower are prohibited from applying, therefore, the observed accessions most likely reflect data capture errors.

Disqualifications

Table 2.14 shows the medical disqualifications among applicants for active component enlisted service during the period between 2008 and 2012, and separately for 2013 according to the International Classification of Diseases, 9th revision (ICD-9) code assigned to each disqualifying condition. Within this table, the number of disqualifications for a given condition is provided along with the percentage of disqualified individuals receiving the disqualification and the prevalence of the disqualification among all Military Entrance Processing Stations (MEPS) applicants. These conditions are ranked according to the number of disqualifications in 2013. Some disqualified individuals have more than one disqualifying medical condition; therefore, the number of disqualifications is greater than the number of disqualified individuals.

The most frequent disqualifying condition in 2013 was disorders of refraction and accommodation, a permanent disqualification that requires an accession medical waiver. Disorders of refraction and accommodation accounted for a notably larger proportion of disqualifications in 2013 applicants (14%) as compared to applicants in the previous five years (9%). The prevalence of disqualifications for disorders of refraction and accommodation was also higher in 2013 (2,572 per 100,000 applicants) compared to applicants in the previous five years (1,678 per 100,000 applicants). The next most common condition was certain adverse effects not elsewhere classified, including allergies and anaphylaxis (12% of disqualifications), which increased significantly relative to the previous five year period (3% of disqualifications). These disqualifications were also nearly four times more common in the total applicant population in 2013 relative to previous years. The third most common reason for medical disqualification was obesity and other hyperalimentation, a temporary condition, which decreased in prevalence among applicants by nearly 50% in 2013 relative to the previous five years. Disqualifications for *Cannabis* abuse (5% in 2013) continued to decline with a prevalence in the applicant population decreasing by about 25% in 2013 relative to the previous five years.

DISQUALIFICATIONS

TABLE 2.14: MEDICAL DISQUALIFICATION OF FIRST-TIME ACTIVE COMPONENT ENLISTED APPLICANTS BY ALL ICD-9 CODES IN 2008–2012 VS. 2013: ALL SERVICES

Condition [†]	2008-2012			2013		
	n	% [‡]	Rate [§]	n	% [‡]	Rate [§]
Disorders of refraction and accommodation	18,776	8.6	1,678	5,192	13.5	2,572
Certain adverse effects, not elsewhere classified	6,469	3.0	578	4,550	11.8	2,254
Obesity and other hyperalimentation	34,241	15.6	3,060	3,474	9.0	1,721
Abnormal loss of weight and underweight	8,765	4.0	783	2,278	5.9	1,128
<i>Cannabis</i> abuse	12,819	5.9	1,146	1,732	4.5	858
Hyperkinetic syndrome of childhood	5,493	2.5	491	1,548	4.0	767
Hearing loss	9,459	4.3	845	1,257	3.3	623
Neurotic disorders	6,011	2.7	537	1,119	2.9	554
Other joint derangement, not elsewhere classified	2,848	1.3	255	1,090	2.8	540
Asthma	7,302	3.3	653	1,057	2.8	524
Total applicants at MEPS	199,301			32,745		
Total of disqualified applicants	219,087			38,485		

MEPS: Military Entrance Processing Stations

[†] Condition categories are not mutually exclusive.[‡] Indicates the percentage with the specified condition among medically disqualified MEPS applicants.[§] Indicates the number of individuals with the specified condition for every 100,000 applicants screened at MEPS.

Table 2.15 shows the medical disqualifications among applicants for reserve component enlisted service during the period between 2008 and 2012, and separately for 2013 according to the ICD-9 code assigned to each disqualifying condition. The most frequent disqualifying condition in 2013 was disorders of refraction and accommodation. Disorders of refraction and accommodation accounted for a notably larger proportion of disqualifications in 2013 applicants (15%) as compared to applicants in the previous five years (9%). The prevalence of disqualifications for disorders of refraction and accommodation was also higher in 2013 (2,816 per 100,000 applicants) compared to applicants in the previous five years (1,868 per 100,000 applicants). The next most common condition was certain adverse effects not elsewhere classified, including allergies and anaphylaxis (13% of disqualifications), which increased significantly relative to the previous five year period (3% of disqualifications). These disqualifications were also nearly four times more common in the total applicant population in 2013 relative to previous years. The third most common reason for medical disqualification was obesity and other hyperalimentation (13% of disqualifications), a temporary condition, which decreased in prevalence among applicants in 2013 relative to the previous five years. Disqualifications for *Cannabis* abuse (3% in 2013) were similar relative to the previous five years.

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TABLE 2.15: MEDICAL DISQUALIFICATION OF FIRST-TIME RESERVE COMPONENT ENLISTED APPLICANTS BY ALL ICD-9 CODES IN 2008–2012 VS. 2013: ALL SERVICES

Condition [†]	2008-2012			2013		
	n	% [‡]	Rate [§]	n	% [‡]	Rate [§]
Disorders of refraction and accommodation	3,723	9.0	1,868	922	14.7	2,816
Certain adverse effects, not elsewhere classified	1,318	3.2	661	812	13.0	2,480
Obesity and other hyperalimentation	7,478	18.1	3,752	787	12.6	2,403
Abnormal loss of weight and underweight	1,669	4.1	837	411	6.6	1,255
<i>Cannabis</i> abuse	1,667	4.0	836	205	3.3	626
Asthma	1,230	3.0	617	189	3.0	577
Hearing loss	1,815	4.4	911	188	3.0	574
Neurotic disorders	1,064	2.6	534	187	3.0	571
Hyperkinetic syndrome of childhood	703	1.7	353	141	2.3	431
Other derangement of joint, not elsewhere classified	491	1.2	246	125	2.0	382
Total applicants at MEPS	199,301			32,745		
Total of disqualified applicants	41,205			6,255		

MEPS: Military Entrance Processing Stations

[†] Condition categories are not mutually exclusive.

[‡] Indicates the percentage with the specified condition among medically disqualified MEPS applicants.

[§] Indicates the number of individuals with the specified condition for every 100,000 applicants screened at MEPS.

Table 2.16 shows the medical disqualifications among applicants for National Guard enlisted service during the period between 2008 and 2012, and separately for 2013 according to the ICD-9 code assigned to each disqualifying condition. Unlike the active and reserve components, obesity and other hyperalimentation remains the leading reason for disqualification in among National Guard applicants. In 2013, 23% of disqualified applicants were disqualified for obesity and other hyperalimentation, similar to the previous five year period. Disorders of refraction and accommodation were the second most common reason for disqualification in National Guard applicants, though these disqualifications accounted for a notably larger proportion of disqualifications in 2013 applicants (11%) as compared to the previous five years (7%). The next most common condition was certain adverse effects not elsewhere classified, including allergies and anaphylaxis (11% of disqualifications), which increased significantly relative to the previous five year period (3% of disqualifications). These disqualifications were also nearly four times more common in the total applicant population in 2013 relative to previous years. Disqualifications for *Cannabis* abuse (4% in 2013) were similar relative to the previous five years.

TABLE 2.16: MEDICAL DISQUALIFICATION OF FIRST-TIME NATIONAL GUARD ENLISTED APPLICANTS BY ALL ICD-9 CODES IN 2008–2012 VS. 2013: ARMY AND AIR FORCE

Condition [†]	2008-2012			2013		
	n	% [‡]	Rate [§]	n	% [‡]	Rate [§]
Obesity and other hyperalimentation	17,069	25.6	6,177	2,711	23.3	5,097
Disorders of refraction and accommodation	4,503	6.8	1,630	1,326	11.4	2,493
Certain adverse effects, not elsewhere classified	1,870	2.8	677	1,323	11.4	2,488
<i>Cannabis</i> abuse	3,607	5.4	1,305	484	4.2	910
Hearing loss	3,333	5.0	1,206	432	3.7	812
Abnormal loss of weight and underweight	1,568	2.4	567	355	3.1	667
Neurotic disorders	1,733	2.6	627	338	2.9	636
Other derangement of joint, not elsewhere classified	667	1.0	241	310	2.7	583
Hyperkinetic syndrome of childhood	1,189	1.8	430	275	2.4	517
Asthma	1,773	2.7	642	257	2.2	483
Total applicants at MEPS	276,332			53,185		
Total of disqualified applicants	66,628			11,658		

MEPS: Military Entrance Processing Stations

[†] Condition categories are not mutually exclusive.[‡] Indicates the percentage with the specified condition among medically disqualified MEPS applicants.[§] Indicates the number of individuals with the specified condition for every 100,000 applicants screened at MEPS.

Table 2.17 shows the medical disqualifications among applicants for active component enlisted service during the period between 2008 and 2012, and separately for 2013 according to other medical failure (OMF) codes provided by US Military Entrance Processing Command (USMEPCOM). These conditions are ranked according to the number of disqualifications in 2013. Some disqualified individuals have more than one disqualifying medical condition; therefore, the number of disqualifications is greater than the number of individuals disqualified.

Weight and body build is the leading category for disqualification in 2013, accounting for 15% of disqualified individuals, which is down from 20.4% in 2008 through 2012. This is generally considered a temporary disqualifying condition that can be remediated by the applicant without need for an accession medical waiver. Skin, lymphatics, allergies is the second most common medical disqualification observed, with 13% of individuals disqualified for this reason in 2013, a prevalence nearly twice than observed in the previous five years (7%). Refraction was the third most common disqualification category in 2013 accounting for 12% of disqualifications, up from 8% in 2008-2012.

TABLE 2.17: MEDICAL DISQUALIFICATION OF FIRST-TIME ACTIVE COMPONENT ENLISTED APPLICANTS BY ALL LISTED USMEPCOM FAILURE CODES IN 2008–2012 VS. 2013: ALL SERVICES

Condition [†]	2008-2012			2013		
	n	% [‡]	Rate [§]	n	% [‡]	Rate [§]
Weight, body build	44,801	20.4	4,004	5,908	15.4	2,926
Skin, lymphatics, allergies	15,449	7.1	1,381	4,877	12.7	2,416
Refraction	17,363	7.9	1,552	4,750	12.3	2,353
Psychiatric	23,751	10.8	2,123	4,375	11.4	2,167
Lower extremities (except feet)	13,789	6.3	1,232	3,028	7.9	1,500
Upper extremities	11,309	5.2	1,011	2,439	6.3	1,208
Lungs and chest (includes breast)	13,533	6.2	1,210	2,339	6.1	1,159
<i>Cannabis</i> test positive	12,218	5.6	1,092	1,604	4.2	794
Genitourinary	8,000	3.7	715	1,427	3.7	707
Eyes-General	5,618	2.6	502	1,289	3.3	638
Total applicants at MEPS	1,118,813			201,894		
Total of disqualified applicants	219,087			38,485		

MEPS: Military Entrance Processing Stations

[†] Condition categories are not mutually exclusive.[‡] Indicates the percentage with the specified condition among medically disqualified MEPS applicants.[§] Indicates the number of individuals with the specified condition for every 100,000 applicants screened at MEPS.

Table 2.18 shows the medical disqualifications among applicants for reserve component enlisted service during the period between 2008 and 2012, and separately for 2013 according to OMF codes provided by USMEPCOM. Weight and body build is the leading category for disqualification in 2013, accounting for 19% of disqualified individuals, which is down from 24% in 2008 through 2012. This is generally considered a temporary disqualifying condition that can be remediated by the applicant without need for an accession medical waiver. Refraction is the second most common medical disqualification observed (13%) and has increased in prevalence among disqualified applicants relative to the previous five years (8%). Skin, lymphatics, allergies is the third most common disqualification category in 2013 accounting for 13% of disqualifications, up from 7% in 2008-2012.

TABLE 2.18: MEDICAL DISQUALIFICATION OF FIRST-TIME RESERVE COMPONENT ENLISTED APPLICANTS BY ALL LISTED USMEPCOM FAILURE CODES IN 2008–2012 VS. 2013: ALL SERVICES

Condition [†]	2008-2012			2013		
	n	% [‡]	Rate [§]	n	% [‡]	Rate [§]
Weight, body build	10,046	24.4	5,041	1,214	19.4	3,707
Refraction	3,443	8.4	1,728	835	13.3	2,550
Skin, lymphatics, allergies	2,962	7.2	1,486	791	12.6	2,416
Psychiatric	3,868	9.4	1,941	604	9.7	1,845
Lower extremities (except feet)	2,542	6.2	1,275	444	7.1	1,356
Lungs and chest (includes breast)	2,521	6.1	1,265	429	6.9	1,310
Upper extremities	1,981	4.8	994	318	5.1	971
<i>Cannabis</i> test positive	1,995	4.8	1,001	240	3.8	733
Endocrine system	821	2.0	412	228	3.6	696
Genitourinary	1,473	3.6	739	216	3.5	660
Total applicants at MEPS		199,301			32,745	
Total of disqualified applicants		41,205			6,255	

MEPS: Military Entrance Processing Stations

[†] Condition categories are not mutually exclusive.[‡] Indicates the percentage with the specified condition among medically disqualified MEPS applicants.[§] Indicates the number of individuals with the specified condition for every 100,000 applicants screened at MEPS.

Table 2.19 shows the medical disqualifications among applicants for National Guard enlisted service during the period between 2008 and 2012, and separately for 2013 according to OMF codes provided by USMEPCOM. Weight and body build is the leading category for disqualification in 2013, accounting for 27% of disqualified individuals, which is down from 32% in 2008 through 2012. This is generally considered a temporary disqualifying condition that can be remediated by the applicant without need for an accession medical waiver. Skin, lymphatics, allergies is the second most common medical disqualification observed in 2013 (12%) which is an increase in prevalence relative to the previous five years (7%). Refraction is the third most common disqualification category in 2013 accounting for 10% of disqualifications, up from 7% in 2008-2012.

TABLE 2.19: MEDICAL DISQUALIFICATION OF FIRST-TIME NATIONAL GUARD ENLISTED APPLICANTS BY ALL LISTED USMEPCOM FAILURE CODES IN 2008–2012 VS. 2013: ARMY AND AIR FORCE

Condition [†]	2008-2012			2013		
	n	% [‡]	Rate [§]	n	% [‡]	Rate [§]
Weight, body build	21,202	31.8	7,673	3,159	27.1	5,940
Skin, lymphatics, allergies	4,385	6.6	1,587	1,396	12.0	2,625
Refraction	4,307	6.5	1,559	1,203	10.3	2,262
Psychiatric	7,211	10.8	2,610	1,153	9.9	2,168
Lower extremities (except feet)	3,899	5.9	1,411	837	7.2	1,574
<i>Cannabis</i> test positive	5,793	8.7	2,096	656	5.6	1,233
Lungs and chest (includes breast)	3,697	5.5	1,338	637	5.5	1,198
Upper extremities	2,917	4.4	1,056	587	5.0	1,104
Hearing	3,376	5.1	1,222	417	3.6	784
Genitourinary	2,083	3.1	754	356	3.1	669
Total applicants at MEPS	276,332			53,185		
Total of disqualified applicants	66,628			11,658		

MEPS: Military Entrance Processing Stations

[†] Condition categories are not mutually exclusive.[‡] Indicates the percentage with the specified condition among medically disqualified MEPS applicants.[§] Indicates the number of individuals with the specified condition for every 100,000 applicants screened at MEPS.

Accession Medical Waivers

Applicants who receive a permanent medical disqualification at the Military Entrance Processing Station (MEPS) may be granted an accession medical waiver for the disqualifying condition(s) from a service-specific waiver authority. This section summarizes waiver considerations that occurred between fiscal years 2008 to 2013. Part I examines all waiver considerations for waiver applicants, regardless of whether or not there is a corresponding Defense Manpower Data Center (DMDC) accession record. Because waivers are granted prior to accession by each service, no distinction between active and reserve components is made at the time of waiver application. Some waiver applicants with prior military service but no prior approved medical waiver may also be included in Part I. Individuals applying to multiple waiver authorities may appear more than once in Part I. Thus, this section addresses the spectrum of waiver applications seen by the waiver authorities. In addition, the waiver conditions most frequently applied for and the most frequently waived conditions for each service's waiver applicants are shown. Part II examines only those approved waiver records from Part I for which there is an accession record, and the individual has no prior service as defined elsewhere in this report. Note that in both, Part I and II, the large apparent decrease in Marine Corps waivers is associated with missing waiver records in 2010 and 2011.

Part I: Medical waivers irrespective of an accession record

Table 2.20 shows the number of active and reserve component waiver considerations and approval percentages by branch of service and year of waiver decision from 2008 to 2013. Multiple waiver considerations by the same waiver authority most frequently reflect resubmissions for the same condition, perhaps with additional information. Multiple waiver records are counted in each year and in each service in which they were considered. Approval percentages represent the proportion of the total waivers considered by each service that year, listed in the table as "Count", who had a waiver approved in each service by 2013. Waiver considerations and approval rates in the Army have generally declined through 2012, but 2013 saw an increase for the first time in the last five years in both waiver considerations and approval rate. In the Navy, the number of waiver considerations were decreasing from 2008 to 2010, but began to increase from 2011 to 2013. The approval rate, however, has steadily decreased until 2013. Marine Corps waiver data were incomplete in 2010 and 2011. The number of waiver considerations in 2013 is lower than 2008-2009, but is slightly higher than 2012, the most recent year of complete data. The approval rate is higher than the 2008-2009 period but lower than 2012.

TABLE 2.20: ACTIVE AND RESERVE COMPONENT WAIVER CONSIDERATIONS BY YEAR AND SERVICE^{*}: 2008-2013

	Army			Navy			Marine Corps			Air Force		
Year	Consider (n)	Approved (n)	Approved (%)	Consider (n)	Approved (n)	Approved (%)	Consider (n)	Approved (n)	Approved (%)	Consider (n)	Approved (n)	Approved (%)
2008	18,897	13,095	69.3	5,304	3,495	65.9	4,726	3,251	68.8	2,354	1,438	61.1
2009	18,591	12,139	65.3	4,775	3,123	65.4	3,852	2,739	71.1	3,214	2,220	69.1
2010	15,698	9,151	58.3	4,763	2,876	60.4	2,189	1,502	68.6	3,264	2,193	67.2
2011	14,887	8,381	56.3	5,171	3,082	59.6	805	590	73.4	2,892	1,793	62.0
2012	14,255	7,854	55.1	6,101	3,502	57.4	2,365	2,081	88.0	4,060	2,281	56.2
2013	15,620	9,637	61.7	7,681	4,693	61.1	2,424	2,106	86.9	3,630	2,178	60.0
Total	98,018			33,795			16,361^{**}			19,414		

^{*} Applicants may be counted more than once per year and in multiple services.

^{**} Value undercounted due to missing Marine waiver records from 2010 and 2011.

Table 2.21 describes active and reserve component waiver considerations by service, including the number of considerations per individual, and the frequency with which applicants have multiple conditions. The Army had the highest number of waiver applications and applicants in the period from 2008 to 2013 (98,018 applications, 90,982 applicants) followed by the Navy (33,795 applications, 33,060 applicants). On average, most waiver applicants did not apply for waivers more than once within a given service. Most applicants (70%-82%) had a single condition regardless of service. The highest percentage of applicants with more than one condition (25.4%) was found in the Air Force.

TABLE 2.21: ACTIVE AND RESERVE COMPONENT WAIVER CONSIDERATION COUNTS^{*}: 2008-2013

	Army	Navy	MarineCorps^{**}	Air Force
All waiver considerations	98,018	33,795	16,361	19,414
Total Applicants	90,982	33,060	15,493	19,126
Average number of considerations per applicant	1.08	1.02	1.06	1.02
Applicants with a single condition	76,648 (78.2%)	23,617 (69.9%)	13,348 (81.6%)	14,301 (73.7%)
Applicants with multiple conditions	20,148 (20.6%)	5,650 (16.7%)	2,974 (18.2%)	4,926 (25.4%)
Applicants with missing conditions	1,222(1.2%)	4,528 (13.4%)	39(0.2%)	187 (1.0%)

^{*} Applicants can be counted in multiple services.

^{**} Value undercounted due to missing Marine waiver records from 2010 and 2011.

[†] In 2008, 56% of Navy waiver records were missing a diagnosis. In 2008-2012, about 5% of records were missing a diagnosis on average.

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Tables 2.22 through 2.25 show the medical conditions for which waivers were most frequently applied and the approval rate for individuals with these conditions, for each service in 2008-2013. Waiver considerations from the years 2008 to 2012 are shown in aggregate to facilitate the comparison of waivers in 2013 to previous years.

Medical accession waiver considerations and approvals for the Army are shown in Table 2.22. Disorders of refraction and accommodation were the most common medical disqualifications for which waivers were sought in 2013. The percentage of applications for waivers for disorders of refraction and accommodation (15%) increased compared to the previous five year period. Certain adverse effects, not elsewhere classified, an ICD-9 code group that includes allergies, was the second most common waiver application in 2013 (13%). These waivers made up a larger portion of the waiver applicant pool in the Army than in the previous five year period (4%). The third leading waiver application type in 2013 was hyperkinetic syndrome of childhood (5%) which was also present increasing proportion of waiver applicants compared to the previous five years (3%).

TABLE 2.22: LEADING CONDITIONS FOR ACTIVE AND RESERVE COMPONENT ACCESSION WAIVERS CONSIDERED IN 2008–2012 VS. 2013: ARMY

	2008-2012				2013			
	Applied		Approved		Applied		Approved	
Condition [†]	n	% [‡]	n	% [§]	n	% [‡]	n	% [§]
Disorders of refraction and accommodation	9,307	11.3	7,608	15.0	2,342	15.0	2,064	21.4
Certain adverse effects, not elsewhere classified ^{**}	3,016	3.7	2,429	4.8	1,948	12.5	1,736	18.0
Hyperkinetic syndrome of childhood	2,133	2.6	1,114	2.2	834	5.3	426	4.4
Hearing loss	6,761	8.2	2,820	5.6	791	5.1	223	2.3
Asthma	3,157	3.8	1,360	2.7	617	4.0	257	2.7
Neurotic disorders	3,497	4.2	911	1.8	615	3.9	78	0.8
Other joint derangement, not elsewhere classified	1,420	1.7	1,033	2.0	500	3.2	422	4.4
Internal derangement of knee	1,602	1.9	896	1.8	357	2.3	232	2.4
Curvature of spine	1,199	1.5	808	1.6	357	2.3	293	3.0
Depressive disorder, not elsewhere classified	1,318	1.6	280	0.6	275	1.8	20	0.2
Contact dermatitis and other eczema	1,624	2.0	1,148	2.3	275	1.8	196	2.0
Total considerations*	82,398				15,620			
Total of approved applicants*	50,662 (61.5%)				9,640 (61.7%)			

[†] Condition categories are not mutually exclusive.

[‡] Indicates the percentage of waiver applicants for the specified condition category, among total waivers considered.

[§] Indicates the percentage of approved waiver applicants for the specified condition category, among total approved waivers.

^{**} Codes in this category typically include unspecified allergies and anaphylactic shock.

* This category includes waiver applicants with missing condition values.

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Table 2.23 shows the leading accession medical waiver conditions applied for and approved by the Navy comparing 2013 to the previous five year period in aggregate. The most common waiver application in the Navy was for allergic manifestations, including allergies to food, medication, and latex. These waivers increased substantially in 2013 (16%) relative to the previous five year period (5%). After allergic manifestations, two types of vision waiver were second and third most common among the waiver application condition types: astigmatism and myopia. Waiver applications for astigmatism increased in prevalence in 2013 (12%) relative to the previous five year period (6%) but waiver application rates for myopia in 2013 (8%) were similar to those observed in the previous five years (10%). Hearing deficiency was the fourth most common waiver application type and decreased slightly in prevalence in 2013 (4%) relative to the previous five year (7%).

TABLE 2.23: LEADING CONDITIONS FOR ACTIVE AND RESERVE COMPONENT ENLISTED ACCESSION WAIVERS CONSIDERED IN 2008–2012 VS. 2013: NAVY

Condition [†]	2008-2012				2013			
	Applied		Approved		Applied		Approved	
	n	% [‡]	n	% [§]	n	% [‡]	n	% [§]
Allergic Manifestations	1,194	4.6	974	6.1	1,232	16.0	1,048	22.3
Astigmatism	1,456	5.6	1,113	6.9	919	12.0	703	15.0
Myopia	2,593	9.9	1,562	9.7	633	8.2	317	6.8
Hearing deficiency	1,772	6.8	430	2.7	323	4.2	35	0.7
Attention deficit w/hyperactivity	729	2.8	434	2.7	288	3.7	130	2.8
Deviation or curvature of spine	519	2.0	139	0.9	278	3.6	81	1.7
Asthma	1,216	4.7	719	4.5	273	3.6	101	2.2
Adverse food reactions, not elsewhere classified	512	2.0	411	2.6	215	2.8	164	3.5
Shoulder dislocations, recurrent	418	1.6	367	2.3	185	2.4	159	3.4
Self-inflicted injury by unspecified means	533	2.0	308	1.9	173	2.3	42	0.9
Injury of bone or joint (lower extremity)	335	1.3	203	1.3	147	1.9	92	2.0
Total considerations*	26,114				7,681			
Total of approved applicants*	16,085 (61.6%)				4,694 (61.1%)			

[†] Condition categories are not mutually exclusive.

[‡] Indicates the percentage of waiver applicants for the specified condition category, among total waivers considered.

[§] Indicates the percentage of approved waiver applicants for the specified condition category, among total approved waivers.

* This category includes waiver applicants with missing condition values.

Table 2.24 shows the leading conditions among enlisted Marine Corps applicants for waivers for 2013 as compared to the period from 2008 to 2012 in aggregate. In 2013 the leading waiver application condition was disorders of refraction and accommodation. Disorders of refraction and accommodation were more prevalent in the 2013 waiver applicant population in 2013 (21%) as compared to the previous five year period (13%). The second most common waiver application in 2013 was for certain adverse effects, not elsewhere classified, including allergies to food, medication, and latex. The prevalence of these types of waiver application increased substantially in 2013 (18%) as compared to previous years (5%). Other nonspecific abnormal findings was the third leading waiver application condition. A small increase in the prevalence of these waivers was observed in 2013 (17%) relative to the previous five year period (14%).

TABLE 2.24: LEADING CONDITIONS FOR ACTIVE AND RESERVE COMPONENT ENLISTED ACCESSION WAIVERS CONSIDERED IN 2008–2012 VS. 2013: MARINE CORPS

	2008-2012				2013			
	Applied		Approved		Applied		Approved	
Condition [†]	n	% [‡]	n	% [§]	n	% [‡]	n	% [§]
Disorders of refraction and accommodation	1,780	12.8	1,488	14.6	516	21.3	486	23.1
Certain adverse effects, not elsewhere classified	714	5.1	628	6.2	444	18.3	431	20.5
Other nonspecific abnormal findings	1,875	13.5	1,392	13.7	405	16.7	333	15.8
Hyperkinetic syndrome of childhood	527	3.8	414	4.1	153	6.3	128	6.1
Asthma	990	7.1	717	7.1	140	5.8	120	5.7
Neurotic disorders	637	4.6	463	4.6	97	4.0	85	4.0
Other disorders of bone and cartilage	468	3.4	389	3.8	65	2.7	56	2.7
Hearing loss	958	6.9	483	4.8	60	2.5	31	1.5
Certain congenital musculoskeletal deformities	172	1.2	125	1.2	50	2.1	45	2.1
Late effects of musculoskeletal and connective tissue injuries	328	2.4	267	2.6	50	2.1	46	2.2
Contact dermatitis and other eczema	349	2.5	257	2.5	49	2.0	47	2.2
Total considerations*	13,397				2,424			
Total of approved applicants*	10,164 (75.9%)				2,107 (86.9%)			

[†] Condition categories are not mutually exclusive.

[‡] Indicates the percentage of waiver applicants for the specified condition category, among total waivers considered.

[§] Indicates the percentage of approved waiver applicants for the specified condition category, among total approved waivers.

^{‡‡} Codes in this category typically include unspecified allergies and anaphylactic shock.

* This category includes waiver applicants with missing condition values.

Leading accession medical waiver application types are shown in Table 2.25 for the Air Force. In 2013, certain adverse effects, not elsewhere classified, including allergies to foods, medicines, and latex, was the most common reason for which waivers were sought. Similar to other services, these waivers increased in prevalence among waiver applicants in 2013 (17%) relative to the previous five years (3%). Disorders of refraction and accommodation were the second most common reason for waiver application in 2013 (13%) and the prevalence of these waivers in 2013 was similar to the observed prevalence among the waiver population in previous years (14%). The third most common waiver requested in 2013 in the Air Force was waivers for hyperkinetic syndrome of childhood. The prevalence of these waivers among the applicant population in 2013 (9%) is a small increase relative to previous years (6%).

TABLE 2.25: LEADING CONDITIONS FOR ACTIVE AND RESERVE COMPONENT ENLISTED ACCESSION WAIVERS CONSIDERED IN 2008–2012 VS. 2013: AIR FORCE

	2008-2012				2013			
	Applied		Approved		Applied		Approved	
Condition [†]	n	% [‡]	n	% [§]	n	% [‡]	n	% [§]
Certain adverse effects, not elsewhere classified ^{††}	467	3.0	357	3.6	606	16.7	469	21.5
Disorders of refraction and accommodation	2,192	13.9	1,482	14.9	482	13.3	314	14.4
Hyperkinetic syndrome of childhood	942	6.0	662	6.7	324	8.9	188	8.6
Asthma	885	5.6	465	4.7	215	5.9	84	3.9
Other joint derangement, not elsewhere classified	316	2.0	259	2.6	160	4.4	138	6.3
Neurotic disorders	526	3.3	355	3.6	155	4.3	78	3.6
Affective psychoses	669	4.2	411	4.1	112	3.1	43	2.0
Contact dermatitis and other eczema	450	2.9	174	1.8	101	2.8	24	1.1
Hearing loss	660	4.2	84	0.8	86	2.4	13	0.6
Curvature of spine	128	0.8	32	0.3	78	2.1	18	0.8
Diseases of sebaceous glands	167	1.1	131	1.3	71	2.0	49	2.2
Total considerations[*]	15,784				3,630			
Total of approved applicants[*]	9,926 (62.9%)				2,179 (60.0%)			

[†] Condition categories are not mutually exclusive.

[‡] Indicates the percentage of waiver applicants for the specified condition category, among total waivers considered.

[§] Indicates the percentage of approved waiver applicants for the specified condition category, among total approved waivers.

^{††} Codes in this category typically include unspecified allergies and anaphylactic shock.

^{*} This category includes waiver applicants with missing condition values.

Tables 2.26 through 2.29 show the most frequently approved waiver conditions ranked by waiver consideration approval percentage for 2013, sorted in descending order by overall approval rate. The same population of considerations was used as in Tables 2.22 to 2.25. Note that all conditions are not mutually exclusive and an individual may appear in the table in multiple condition rows.

In Table 2.26, among active and reserve Army applicants, waivers for strabismus and other disorders of binocular eye movements (90%) had the highest proportion of approved applicants in 2013. The next most common condition was certain adverse effects, not elsewhere classified, including allergies to food, medicines, and latex, (89%) which increased in the proportion of approved waiver applications in 2013 when compared to the prior five year period. Disorders of refraction and accommodation (88%) was the third most commonly waived condition.

Table 2.27 shows little change in the approval rates among the conditions with the highest approval rates when comparing 2013 to the previous five years. Shoulder instability (88%) had the highest approval rates in 2013 followed by recurrent shoulder dislocations (86%), allergic manifestations (85%), and anterior cruciate ligament injury (84%).

Table 2.28 shows that among Marine Corps enlistees, the conditions with the highest approval rates were certain adverse effects not elsewhere classified, including allergic reactions and history of anaphylaxis (97%), contact dermatitis and eczema (96%), and disorders of refraction and accommodation (94%). The Marine Corps waiver authority approval rates were generally higher in 2013 than in prior years. The largest increase in approval rates was for contact dermatitis and eczema (96% in 2013, 74% in 2008-2012). However, Marine Corps waiver data were under-reported in 2010 and 2011 and data from these years may not be representative of the waiver population.

Table 2.28 shows that among Air Force enlistees, the conditions with the highest proportion of approved applications generally had a low number of applicants. Waiver approvals were most common among applications for other joint derangements (86%), congenital anomalies of genital organs (86%), other joint derangements (82.7%), and certain adverse effects not elsewhere classified, including allergic reactions and history of anaphylaxis (77%).

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TABLE 2.26: CONDITION-SPECIFIC CATEGORIES FOR THOSE ACCESSION MEDICAL WAIVERS WITH THE HIGHEST PROPORTION OF APPROVED APPLICATIONS AMONG ACTIVE AND RESERVE COMPONENT ARMY ENLISTEES: 2008–2012 VS. 2013

Condition [†]	Total		2008-2012		2013	
	n	% [*]	n	% [*]	n	% [*]
Strabismus and other disorders of binocular eye movements	693	81.5	511	78.7	182	89.6
Certain adverse effects, not elsewhere classified ^{††}	4,964	83.9	3,016	80.5	1,948	89.1
Disorders of refraction and accommodation	11,649	83.0	9,307	81.7	2,342	88.1
Other joint derangement, not elsewhere classified	1,920	75.8	1,420	72.7	500	84.4
Curvature of spine	1,556	70.8	1,199	67.4	357	82.1
Dislocation of shoulder	1,222	75.0	1,003	74.6	219	76.7
Contact dermatitis and other eczema	1,899	70.8	1,624	70.7	275	71.3
Internal derangement of knee	1,959	57.6	1,602	55.9	357	65.0
Hyperkinetic syndrome of childhood	2,967	51.9	2,133	52.2	834	51.1
Asthma	3,774	42.8	3,157	43.1	617	41.7

* Percent of waiver applications that were approved.

† Condition categories are not mutually exclusive.

†† Codes in this category typically include unspecified allergies and anaphylactic shock.

TABLE 2.27: CONDITION-SPECIFIC CATEGORIES FOR THOSE ACCESSION MEDICAL WAIVERS WITH THE HIGHEST PROPORTION OF APPROVED APPLICATIONS AMONG ACTIVE AND RESERVE COMPONENT NAVY ENLISTEES: 2008–2012 VS. 2013

Condition [†]	Total		2008-2012		2013	
	n	% [*]	n	% [*]	n	% [*]
Shoulder instability	562	88.6	433	88.9	129	87.6
Shoulder dislocations, recurrent	603	87.2	418	87.8	185	85.9
Allergic Manifestations	2,426	83.3	1,194	81.6	1,232	85.1
Anterior cruciate ligament injury, knee	314	82.2	201	81.1	113	84.1
Astigmatism	2,375	76.5	1,456	76.4	919	76.5
Adverse food reactions, not elsewhere classified	727	79.1	512	80.3	215	76.3
Injury of bone or joint (lower extremity)	482	61.2	335	60.6	147	62.6
Myopia	3,226	58.2	2,593	60.2	633	50.1
Attention deficit w/hyperactivity	1,017	55.5	729	59.5	288	45.1
Asthma	1,489	55.1	1,216	59.1	273	37.0

* Percent of waiver applications that were approved.

† Condition categories are not mutually exclusive.

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TABLE 2.28: CONDITION-SPECIFIC CATEGORIES FOR THOSE ACCESSION MEDICAL WAIVERS WITH THE HIGHEST PROPORTION OF APPROVED APPLICATIONS AMONG ACTIVE AND RESERVE COMPONENT MARINE CORPS ENLISTEES: 2008–2012 vs. 2013

Condition [†]	Total		2008-2012		2013	
	n	% [*]	n	% [*]	n	% [*]
Certain adverse effects, not elsewhere classified ^{**}	1,158	91.5	714	88.0	444	97.1
Contact dermatitis and other eczema	398	76.4	349	73.6	49	95.9
Disorders of refraction and accommodation	2296	86.0	1780	83.6	516	94.2
Late effects of musculoskeletal and connective tissue injuries	378	82.8	328	81.4	50	92.0
Certain congenital musculoskeletal deformities	222	76.6	172	72.7	50	90.0
Neurotic disorders	734	74.7	637	72.7	97	87.6
Other disorders of bone and cartilage	533	83.5	468	83.1	65	86.2
Asthma	1,130	74.1	990	72.4	140	85.7
Hyperkinetic syndrome of childhood	680	79.7	527	78.6	153	83.7
Other nonspecific abnormal findings	2280	75.7	1875	74.2	405	82.2

* Percent of waiver applications that were approved.

† Condition categories are not mutually exclusive.

** Codes in this category typically include unspecified allergies and anaphylactic shock.

TABLE 2.29: CONDITION-SPECIFIC CATEGORIES FOR THOSE ACCESSION MEDICAL WAIVERS WITH THE HIGHEST PROPORTION OF APPROVED APPLICATIONS AMONG ACTIVE AND RESERVE COMPONENT AIR FORCE ENLISTEES: 2008–2012 vs. 2013

Condition [†]	Total		2008-2012		2013	
	n	% [*]	n	% [*]	n	% [*]
Other joint derangement, not elsewhere classified	476	83.4	316	82.0	160	86.3
Congenital anomalies of genital organs	284	86.3	220	86.4	64	85.9
Certain adverse effects, not elsewhere classified ^{**}	1073	77.0	467	76.4	606	77.4
Diseases of sebaceous glands	238	75.6	167	78.4	71	69.0
Disorders of refraction and accommodation	2,674	67.2	2192	67.6	482	65.1
Bulbus cordis anomalies and anomalies of cardiac septal closure	417	74.6	354	76.6	63	63.5
Hyperkinetic syndrome of childhood	1,266	67.1	942	70.3	324	58.0
Anxiety, dissociative and somatoform disorders	681	63.6	526	67.5	155	50.3
Asthma	1,100	49.9	885	52.5	215	39.1
Episodic mood disorders	781	58.1	669	61.4	112	38.4

* Percent of waiver applications that were approved.

† Condition categories are not mutually exclusive.

** Codes in this category typically include unspecified allergies and anaphylactic shock

Part II: Medical waivers with an accession record

Table 2.30 and Table 2.31 show by component the number of enlisted applicants who were granted accession medical waivers and had a MEPS physical examination record indicating no prior service. Applicants are counted once in each component to which they applied, in the most recent year of waiver consideration. Results are shown for each year from 2008 to 2013 for all service branches combined. Also shown are the numbers and percentages of individuals who subsequently accessed onto enlisted active or reserve component. Individuals are counted as accessions only in the component to which they accessed. For example, an enlistee who applied for both active and reserve component but enlisted into the active component is only considered an accession when examining active component waiver applicants. Among reserve component waiver considerations this person is only considered an applicant.

In Table 2.30, the rate of active component applicants granted waivers who subsequently accessed has remained between 76 and 80% from 2008 to 2012. There was an increase in applicants with approved waivers in 2013 compared to the previous year. In Table 2.31, the accession rate for reserve applicants was consistently lower compared to active component applicants and seems to be on the decline between 2008 and 2012, reaching a five year low of 50% in 2012. The large increase of applicants with approved waivers seen in the active component applicants was not present in reserve component applicants.

TABLE 2.30: ACTIVE COMPONENT ACCESSIONS FOR ENLISTED APPLICANTS WHO RECEIVED A WAIVER IN 2008–2013[†]
BY YEAR: ALL SERVICES

Year of waiver consideration	Applicants with waivers granted	Total Applicants who accessed	
		n	%
2008	14,504	11,411	78.7
2009	14,622	11,092	75.9
2010*	12,074	9,370	77.6
2011*	10,943	8,595	78.5
2012	12,935	10,340	79.9
2013 [‡]	15,729	7,881	50.1

[†] Considers accessions among only those applicants with both a MEPS physical examination for Active component service and an approved waiver.

* Value undercounted due to missing Marine Corps waiver records from 2010 and 2011.

[‡] The accession rate was underestimated due to a lack of sufficient follow up time.

TABLE 2.31: RESERVE COMPONENT ACCESSIONS FOR ENLISTED APPLICANTS WHO RECEIVED A WAIVER IN 2008–2013[†] BY YEAR: ALL SERVICES

Year of waiver consideration	Applicants with waivers granted	Total Applicants who accessed	
		n	%
2008	3,389	2,049	60.5
2009	3,223	1,857	57.6
2010*	2,124	1,154	54.3
2011*	2,080	1,248	60.0
2012	2,429	1,221	50.3
2013 [‡]	2,765	1,128	40.8

[†] Considers accessions among only those applicants with both a MEPS physical examination for Active component service and an approved waiver.

* Value undercounted due to missing Marine waiver records from 2010 and 2011.

[‡] The accession rate was underestimated due to a lack of sufficient follow up time.

Tables 2.32 and 2.33 describe the characteristics of active and reserve component applicants who were granted waivers. Individuals with a corresponding MEPS application record as well as a subsequent accession record are shown for 2008-2012 and separately for 2013. Total numbers of records used in calculating each percentage vary slightly depending upon the completeness of data on the demographic factor being considered. For example, an individual with missing data on sex but not on race will be included in the description of race of applicants but not in the description of sex.

Table 2.32 shows the demographic characteristics of active component waiver applicants and accessions with an approved medical waiver. Individuals who accessed with waivers in 2013 were similar to the waiver applicant population with respect to sex, age, and race. Sex and race distribution of waiver applicants in 2013 were similar to the waiver applicant and accession population from 2008-2012. The waiver applicants in 2013 tended to be younger compared to the previous five year period, with fewer applicants in the over 25 age group. In 2013, applicants with less than a high school diploma made up a smaller proportion of accessions compared to applicants. The proportion of applicants and accessions with education beyond a high school diploma was lower in 2013 compared to the previous five year period. Armed Forces Qualification Test (AFQT) scores in 2013 were similarly distributed compared to the previous five years. Over 99% of all applicants and accessions approved for a waiver had a permanently disqualified medical status with relatively few fully qualified or temporarily disqualified individuals. The proportion of permanently disqualified individuals among those receiving waivers was similar in 2013 as compared to 2008-2012.

Table 2.33 shows the demographic characteristics for reserve component waiver applicants and accessions with an approved medical waiver. Individuals who accessed with waivers in 2013 were similar to the waiver applicant population with regard to sex, age, and race. Applicants and

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accessions in 2013 were younger compared to the previous five year period, with a smaller proportion individuals over the age of 25. In 2013, a greater proportion of applicants and accessions were in the high school senior education category and a smaller proportion with at least some college compared to the previous five years. AFQT score distributions were similar in 2013 compared to 2008-2012. Over 99% of Reserve applicants and 100% of accessions had a permanently disqualified status.

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TABLE 2.32: DEMOGRAPHIC CHARACTERISTICS OF ACTIVE COMPONENT ENLISTED APPLICANTS WHO RECEIVED AN ACCESSION MEDICAL WAIVER COMPARED TO ACTIVE COMPONENT ACCESSIONS 2008-2012 VS. 2013: ALL SERVICES

	2008-2012				2013			
	All waivers		Accessed only		All waivers		Accessed only	
	n	%	n	%	n	%	n	%
Sex*								
Male	53,340	82.0	42,322	83.3	12,961	82.4	6,581	83.5
Female	11,734	18.0	8,486	16.7	2,763	17.6	1,300	16.5
Age at Waiver*								
17 – 20	37,757	58.0	30,260	59.6	10,119	64.3	5,113	64.9
21 – 25	18,902	29.0	14,692	28.9	4,421	28.1	2,224	28.2
> 25	8,416	12.9	5,854	11.5	1,189	7.6	544	6.9
Race*								
White	49,733	76.4	39,402	77.6	11,707	74.5	6,015	76.3
Black	8,762	13.5	6,776	13.3	2,348	14.8	1,137	14.4
Other	6,583	10.1	4,630	9.1	1,674	10.8	729	9.3
Education Level*								
Below HS senior**	620	1.0	384	0.8	62	0.4	4	0.1
HS senior	5,520	8.5	3,707	7.3	1,808	11.5	468	5.9
HS diploma	48,362	74.3	38,657	76.1	11,673	74.2	6,325	80.3
Some college	5,731	8.8	4,482	8.8	1,095	7.0	555	7.0
Bachelor's and higher	4,845	7.4	3,578	7.0	1,091	6.9	529	6.7
AFQT Score*								
93-99	6,098	9.4	4,884	9.6	1,367	8.7	632	8.0
65-92	26,683	41.0	21,109	41.5	6,621	42.1	3,300	41.9
50-64	16,973	26.1	13,263	26.1	4,387	27.9	2,180	27.7
30-49	14,667	22.5	11,181	22.0	3,301	21.0	1,765	22.4
11-29	480	0.7	271	0.5	43	0.3	3	0.0
<11	15	0.0	2	0.0	1	0.0	1	0.0
Medical Status								
Fully Qualified	394	0.6	185	0.4	64	0.4	20	0.3
Permanent DQ	64,428	99.0	50,409	99.2	15,642	99.4	7,848	99.6
Temporary DQ	256	0.4	214	0.4	23	0.1	13	0.2
Total	65,078		50,808		15,729		7,881	

HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification

* Individuals with missing values for demographic variables are included in the total.

** Encompasses the following three cases: 1) one who is pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc.; 2) one who is not attending high school and who is neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school but is not yet a senior

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TABLE 2.33: DEMOGRAPHIC CHARACTERISTICS OF RESERVE COMPONENT ENLISTED APPLICANTS WHO RECEIVED AN ACCESSION MEDICAL WAIVER COMPARED TO ACTIVE COMPONENT ACCESSIONS 2008-2012 VS. 2013: ALL SERVICES

	2008-2012				2013			
	All waivers		Accessed only		All waivers		Accessed only	
	n	%	n	%	n	%	n	%
Sex*								
Male	7,398	76.3	5,749	76.4	1,757	77.2	857	76.0
Female	2,302	23.7	1,780	23.6	519	22.8	271	24.0
Age at Waiver*								
17 – 20	5,137	53.0	4,169	55.4	1,465	64.4	766	67.9
21 – 25	2,377	24.5	1,761	23.4	560	24.6	237	21.0
> 25	2,186	22.5	1,599	21.2	251	11.0	125	11.1
Race*								
White	7,294	75.2	5,846	77.6	1,652	72.6	856	75.9
Black	1,499	15.5	1,136	15.1	421	18.5	209	18.5
Other	907	9.4	547	7.3	203	8.9	63	5.6
Education Level*								
Below HS senior**	528	5.4	474	6.3	60	2.6	45	4.0
HS senior	1,180	12.2	950	12.6	384	16.9	218	19.3
HS diploma	6,070	62.6	4,660	61.9	1,505	66.1	712	63.1
Some college	979	10.1	761	10.1	168	7.4	80	7.1
Bachelor's and higher	943	9.7	684	9.1	159	7.0	73	6.5
AFQT Score*								
93-99	1,116	8.4	632	8.4	194	7.0	72	6.4
65-92	4,888	36.9	2,837	37.7	1,098	39.7	473	41.9
50-64	3,286	24.8	1,843	24.5	715	25.9	271	24.0
30-49	3,542	26.7	1,960	26.0	735	26.6	302	26.8
11-29	193	1.5	77	1.0	15	0.5	5	0.4
<11	21	0.2	14	0.2	0	0.0	0	0.0
Medical Status								
Fully Qualified	31	0.3	12	0.2	3	0.1	0	0.0
Permanent DQ	9,637	99.4	7,494	99.5	2,273	99.9	1,128	100.0
Temporary DQ	32	0.3	23	0.3	0	0.0	0	0.0
Total	9,700		7,529		2,276		1,128	

HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification

* Individuals with missing values for demographic variables are included in the total.

** Encompasses the following three cases: 1) one who is pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc.; 2) one who is not attending high school and who is neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school but is not yet a senior

Hospitalizations

This section summarizes hospitalization records of service members admitted to any military treatment facility. Hospitalization records are summarized for all services by component for enlistees who began service during FY 2008-2013 and for whom AMSARA has a corresponding accession record. This section accordingly examines hospitalizations among active, reserve and National Guard component enlistees early in service. Relative risks are used to compare the risk of hospitalization across demographic groups. The comparison group chosen for each comparison depends on the factor being considered. For factors with some inherent order (e.g. age group, which ranges from younger to older) it is the first or last group in that order, as appropriate. Otherwise, the comparison group is generally the largest group.

Table 2.34 through 2.36 shows the hospitalizations and individuals hospitalized by component among those who accessed during each year from 2008-2013. Hospitalizations are separated into two groups: one that includes hospitalizations occurring within one year of service and one that includes hospitalizations occurring within the second year of service. Enlistees in 2013 do not have sufficient follow-up time for the second group. Because multiple hospitalizations can occur per person, results are shown both in terms of hospitalizations (“Admissions”) and individuals hospitalized (“Individuals”). The proportion of individuals hospitalized (% of individuals) is relatively stable for active, reserve, and National Guard component enlistees between 2008 and 2013.

TABLE 2.34: ACTIVE COMPONENT HOSPITALIZATIONS IN 2008- 2013 BY YEAR: ALL SERVICES

Year	Accessed (n)	> 1 year of service			1-2 years of service		
		Admissions (n)	Individuals (n)	Individuals (%)	Admissions (n)	Individuals (n)	Individuals (%)
2008	162,700	6,363	5,578	3.4	6,210	4,724	2.9
2009	161,061	5,442	4,742	2.9	5,698	4,364	2.7
2010	159,745	4,876	4,286	2.7	5,810	4,355	2.7
2011	152,658	4,638	4,097	2.7	4,814	3,796	2.5
2012	155,658	4,316	3,789	2.4	1,935	1,558	1.0
2013*	165,905	2,310	2,113	1.3	-	-	-
Total	957,727	27,944	24,604		24,467	18,797	

* For 2013 accessions, hospitalizations in the first year of service are underestimated and hospitalizations in the second year of service are not calculated due to lack of sufficient follow up time.

TABLE 2.35: RESERVE COMPONENT HOSPITALIZATIONS IN 2008- 2013 BY YEAR: ALL SERVICES

Year	Accessed (n)	Admissions (n)	>1 year of service		1-2 years of service		
			Individuals (n)	Individuals (%)	Admissions (n)	Individuals (n)	Individuals (%)
2008	35,449	598	555	1.6	128	105	0.3
2009	34,969	447	406	1.2	67	56	0.2
2010	28,132	257	240	0.9	114	83	0.3
2011	30,305	539	495	1.6	100	76	0.3
2012	24,150	393	361	1.5	37	29	0.1
2013*	21,023	173	162	0.8	-	-	-
Total	174,028	2,407	2,219		446	349	

* For 2013 accessions, hospitalizations in the first year of service are underestimated and hospitalizations in the second year of service are not calculated due to lack of sufficient follow up time.

TABLE 2.36: NATIONAL GUARD HOSPITALIZATIONS IN 2008- 2013 BY YEAR: ARMY AND AIR FORCE

Year	Accessed (n)	Admissions (n)	>1 year of service		1-2 years of service		
			Individuals (n)	Individuals (%)	Admissions (n)	Individuals (n)	Individuals (%)
2008	53,478	755	706	1.3	208	180	0.3
2009	47,136	443	412	0.9	75	59	0.1
2010	46,027	413	371	0.8	133	100	0.2
2011	40,109	511	477	1.2	89	75	0.2
2012	41,988	502	455	1.1	59	45	0.1
2013*	28,047	172	162	0.6	-	-	-
Total	256,785	2,796	2,583		564	459	

* For 2013 accessions, hospitalizations in the first year of service are underestimated and hospitalizations in the second year of service are not calculated due to lack of sufficient follow up time.

Table 2.37 shows that the risk of hospitalization within one year of accession for active component enlisted personnel varies by service. Army enlistees had a higher risk of hospitalization in the first year of service compared to Navy and Air Force enlistees, but not the Marine Corps enlistees. Navy active component enlistees had the lowest risk of hospitalization among all services. The demographic characteristics of active component enlistees within one year of accession show that the risk of hospitalization was greatest for women, enlistees over the age of 25, white enlistees, those who had less than a high school diploma, and enlistees with an Armed Forces Qualification Test (AFQT) score in the lowest percentile group, 11-29. The risk of hospitalization is significantly higher among the two disqualified group for medical status compared to the fully qualified group. Enlistees with temporary disqualifications have the highest risk of hospitalization.

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TABLE 2.37: HOSPITAL ADMISSIONS WITHIN ONE YEAR OF ACCESSION FOR ACTIVE COMPONENT ENLISTED PERSONNEL ACCESSED IN 2008 – 2013: ALL SERVICES

	Accessed (n)	Admissions (n)	n	Individuals hospitalized		
				%	Crude RR	95% CI
Service						
Army (REF)	378,325	14,185	12,465	3.3	1.00	-
Navy	215,416	2,559	2,215	1.0	0.31	(0.30, 0.33)
Marine Corps	192,837	7,221	6,420	3.3	1.01	(0.98, 1.04)
Air Force	171,149	3,979	3,504	2.0	0.62	(0.60, 0.64)
Sex*						
Male (REF)	800,783	22,184	19,629	2.5	1.00	-
Female [†]	156,943	5,760	4,975	3.2	1.29	(1.25, 1.33)
Age at Accession*						
17 – 20 (REF)	617,611	17,950	15,870	2.6	1.00	-
21 – 25	268,560	7,457	6,543	2.4	0.95	(0.92, 0.98)
> 25	71,551	2,537	2,191	3.1	1.19	(1.14, 1.25)
Race*						
White (REF)	713,012	21,658	19,052	2.7	1.00	-
Black	156,158	4,269	3,790	2.4	0.91	(0.88, 0.94)
Other	88,557	2,017	1,762	2.0	0.74	(0.71, 0.78)
Education Level*						
Below HS graduate**	3,530	198	166	4.7	1.83	(1.48, 2.26)
HS diploma (REF)	828,362	24,135	21,276	2.6	1.00	-
Some college	76,234	2,520	2,189	2.9	0.61	(0.52, 0.71)
Bachelor's or higher	49,508	1,089	971	2.0	0.42	(0.36, 0.49)
AFQT Score*						
93 – 99 (REF)	66,657	1,632	1,452	2.2	1.00	-
65 – 92	380,529	10,595	9,328	2.5	1.13	(1.09, 1.16)
50 – 64	261,164	7,855	6,866	2.6	1.21	(1.17, 1.24)
30 – 49	236,313	7,593	6,727	2.8	1.31	(1.27, 1.35)
11 – 29	5,461	250	212	3.9	1.78	(1.56, 2.04)
Medical Status						
Fully Qualified (REF)	829,183	23,346	20,609	2.5	1.00	-
Temporary DQ	43,544	1,736	1,496	3.4	1.38	(1.29, 1.48)
Permanent DQ	85,000	2,862	2,499	2.9	1.18	(1.11, 1.26)
Total	957,727	27,944	24,604			

RR: Relative Risk; CI: Confidence Interval; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification; REF: Referent Group

* Individuals with missing values for demographic variables are included in the total.

[†]Hospitalizations for pregnancy are included.

**Encompasses the following three cases: 1) one who is pursuing completion of the GED or other test based high school equivalency diploma, vocational school, or secondary school, etc.; 2) one who is not attending high school and who is neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school but is not yet a senior

Table 2.38 shows the risk of hospitalization within one year of accession for reserve component enlisted personnel. Marine Corps enlistees had the highest risk of hospitalization in the first year of service, while Navy enlistees had the lowest risk of hospitalization. The risk of hospitalization within one year of accession was lowest for reserve component enlistees over the age of 25 and enlistees who had less than a high school diploma. There was no difference in risk by sex, race, and AFQT score. Enlistees with a temporary or permanent disqualification both had higher risks of hospitalization than fully qualified enlistees.

TABLE 2.38: HOSPITAL ADMISSIONS WITHIN ONE YEAR OF ACCESSION FOR RESERVE COMPONENT ENLISTED PERSONNEL ACCESSED IN 2008–2013: ALL SERVICES

	Individuals hospitalized					
	Accessed (n)	Admissions (n)	n	%	Crude RR	95% CI
Service						
Army (REF)	102,634	1,370	1,271	1.2	1.00	-
Navy	18,799	84	75	0.4	0.32	(0.26, 0.41)
Marine Corps	31,516	728	671	2.1	1.72	(1.57, 1.89)
Air Force	21,079	225	202	1.0	0.77	(0.67, 0.90)
Sex*						
Male (REF)	133,972	1,821	1,684	1.3	1.00	-
Female [†]	40,056	586	535	1.3	1.06	(0.96, 1.17)
Age at Accession*						
17 – 20 (REF)	105,611	1,506	1,385	1.3	1.00	-
21 – 25	42,998	597	565	1.3	1.00	(0.91, 1.10)
> 25	24,801	302	267	1.1	0.82	(0.72, 0.94)
Race*						
White (REF)	127,320	1,800	1,649	1.3	1.00	-
Black	34,031	433	408	1.2	0.93	(0.83, 1.03)
Other	12,677	174	162	1.3	0.99	(0.84, 1.16)
Education Level*						
Below HS graduate**	8,962	73	68	0.8	0.58	(0.45, 0.73)
HS diploma (REF)	136,150	1,945	1,792	1.3	1.00	-
Some college	18,755	270	251	1.3	1.02	(0.89, 1.16)
Bachelor's or higher	10,143	119	108	1.1	0.81	(0.67, 0.98)
AFQT Score*						
93 – 99 (REF)	10,522	158	141	1.3	1.00	-
65 – 92	63,346	944	857	1.4	1.01	(0.85, 1.20)
50 – 64	43,814	582	544	1.2	0.93	(0.77, 1.11)
30 – 49	50,149	694	651	1.3	0.97	(0.81, 1.16)
11 – 29	1,921	27	25	1.3	0.97	(0.64, 1.48)
Medical Status						
Fully Qualified (REF)	150,084	1,985	1,840	1.2	1.00	-
Temporary DQ	8,929	160	142	1.6	1.30	(1.10, 1.54)
Permanent DQ	15,015	262	237	1.6	1.29	(1.13, 1.47)
Total	174,028	2,407	2,219			

RR: Relative Risk; CI: Confidence Interval; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification; REF: Referent Group

* Individuals with missing values for demographic variables are included in the total.

[†]Hospitalizations for pregnancy are included.

**Encompasses the following three cases: 1) one who is pursuing completion of the GED or other test based high school equivalency diploma, vocational school, or secondary school, etc.; 2) one who is not attending high school and who is neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school but is not yet a senior

Table 2.39 shows the risk of hospitalization within one year of accession for National Guard enlisted personnel. The risk of hospitalization in the first year of service was highest for Army National Guard enlistees, women and enlistees over the age of 21. Enlistees who had less than a high school diploma had lower risk of hospitalization than enlistees with other education credentials. There was no difference in risk by race or AFQT score. Enlistees with temporary disqualifications had the highest risk of hospitalization compared to fully qualified and permanently disqualified enlistees.

TABLE 2.39: HOSPITAL ADMISSIONS WITHIN ONE YEAR OF ACCESSION FOR NATIONAL GUARD COMPONENT ENLISTED PERSONNEL ACCESSED IN 2008–2013: ARMY AND AIR FORCE

	Individuals hospitalized					
	Accessed (n)	Admissions (n)	n	%	Crude RR	95% CI
Service						
Army (REF)	226,724	2,600	2,403	1.1	1.00	-
Navy	30,061	196	180	0.6	0.56	(0.49, 0.66)
Sex*						
Male (REF)	204,303	2,087	1,933	0.9	1.00	-
Female*	52,480	709	650	1.2	1.31	(1.20, 1.43)
Age at Accession*						
17 – 20 (REF)	161,537	1,631	1,521	0.9	1.00	-
21 – 25	61,111	738	677	1.1	1.18	(1.08, 1.29)
> 25	33,595	423	381	1.1	1.20	(1.08, 1.35)
Race*						
White (ref)	208,197	2,244	2,070	1.0	1.00	-
Black	38,229	448	413	1.1	1.09	(0.98, 1.21)
Other	10,359	104	100	1.0	0.97	(0.80, 1.19)
Education Level*						
Below HS graduate**	24,432	210	196	0.8	0.78	(0.68, 0.91)
HS diploma (REF)	183,020	2,029	1,874	1.0	1.00	-
Some college	35,453	405	374	1.1	1.03	(0.92, 1.15)
Bachelor's or higher	13,868	152	139	1.0	0.98	(0.82, 1.16)
AFQT Score*						
93 – 99 (REF)	15,603	155	141	0.9	1.00	-
65 – 92	91,896	996	924	1.0	1.11	(0.93, 1.33)
50 – 64	66,048	752	691	1.0	1.16	(0.97, 1.39)
30 – 49	76,994	864	800	1.0	1.15	(0.96, 1.37)
11 – 29	3,179	25	23	0.7	0.80	(0.52, 1.24)
Medical Status						
Fully Qualified (REF)	218,954	2,337	2,166	1.0	1.00	-
Temporary DQ	17,715	227	209	1.2	1.19	(1.04, 1.37)
Permanent DQ	20,116	232	208	1.0	1.05	(0.91, 1.20)
Total	256,785	2,796	2,583			

RR: Relative Risk; CI: Confidence Interval; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification; REF: Referent Group
* Individuals with missing values for demographic variables are included in the total.

†Hospitalizations for pregnancy are included.

**Encompasses the following three cases: 1) one who is pursuing completion of the GED or other test based high school equivalency diploma, vocational school, or secondary school, etc.; 2) one who is not attending high school and who is neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school but is not yet a senior

Hospitalizations for enlisted service members by condition category and service are shown in Tables 2.40 to 2.45 for the years 2008 to 2012 in aggregate and separately for 2013. The most common condition categories in the first and second year of service for each component are shown.

Table 2.40 shows the most common condition categories during the first year of service for active component enlistees by service. For each service, mental disorders were the most common conditions for which hospitalizations occurred in the first year of service in 2008-2012 and 2013. The percentage of hospitalizations in 2013 attributable to this category was lower in the Army (21%) and Marine Corps (23%) than in the Navy (28%) and the Air Force (41%). Compared to the previous five year period, the percentage of mental disorders in 2013 has increased for each service. Among Army enlistees, the next most common condition categories were pneumonia and influenza (8%), infections of the skin and subcutaneous tissue (6%), and fracture (5%). The percentage of hospitalizations for all three categories has decreased compared to 2008-2012. Among Navy enlistees in 2013, the next most common reasons for hospitalization were psychoses (7%), alcohol and drug dependence (6%), and nonspecific symptoms (4%). Among Marine Corps, infections of the skin and subcutaneous tissue (10%), pneumonia and influenza (10%), and fracture (5%) were the next most common hospitalizations in 2013. Nonspecific symptoms (6%), psychoses (5%), and appendicitis (4%) were the next most common hospitalizations among Air Force enlistees.

TABLE 2.40: DISTRIBUTION OF PRIMARY CAUSE CATEGORIES FOR HOSPITALIZATIONS DURING FIRST YEAR OF SERVICE AMONG ACTIVE COMPONENT ENLISTEES IN 2008–2012 VS. 2013 BY SERVICE

Category	Army		Navy		Marine Corps		Air Force	
	2008-2012 (%) [*]	2013 (%) [*]	2008-2012 (%) [*]	2013 (%) [*]	2008-2012 (%) [*]	2013 (%) [*]	2008-2012 (%) [*]	2013 (%) [*]
Mental disorders	16.6	21.0	23.8	27.6	17.7	22.8	31.1	41.0
Pneumonia and influenza	10.8	7.5	3.7	0.9	13.9	9.8	6.0	1.3
Infections of skin and subcutaneous tissue	7.0	5.9	5.4	2.8	11.0	10.1	6.0	2.6
Fracture	6.1	5.1	4.2	3.8	4.4	4.8	2.3	2.2
Psychoses	5.9	5.4	6.8	6.6	4.7	2.2	5.2	5.4
Nonspecific symptoms	5.4	4.5	5.8	4.3	3.9	4.4	6.5	5.6
Injuries	4.1	4.0	2.8	2.3	2.9	2.8	1.9	0.6
Appendicitis	2.8	3.5	5.7	4.2	3.2	2.7	4.3	4.1
Acute respiratory infections	2.3	1.5	0.9	0.4	1.1	0.7	1.3	0.6
Alcohol and drug dependence	2.3	2.1	4.1	5.9	1.2	0.7	1.0	0.9
Poisoning and toxic effects	2.2	1.7	3.0	2.8	1.7	1.6	1.2	0.9
Total hospitalizations	12,064	2,122	2,030	529	6,096	1,125	3,440	539

^{*} % of total hospitalizations

As shown in Table 2.41, during the second year of service for active component enlistees hospitalizations for complications of pregnancy, childbirth, and the puerperium are the most common across the services, except for in the Marine Corps in which mental disorders were again the most common cause of hospitalizations. The percentage of hospitalizations in 2013 in this category was higher among Army (31%) and Navy (35%) enlistees than among the Marine Corps (19%) and the Air Force enlistees (25%). The Air Force saw the greatest drop in hospitalizations for this condition category compared to the previous five years. Mental disorders were the next most common cause of hospitalization in the Army (13%), Navy (19%), and Air Force (25%) and the number one cause of hospitalizations among the Marine Corps (24%). In all services but the Air Force, there was an increase in hospitalizations for mental disorders compared to the previous five year period, with the greatest increase in the Marine Corps. Fracture was the third most common condition for hospitalization in the Army (6%) and Marine Corps (5%), which were down from the previous five year period in both services. Psychoses (6%) was the third most common hospitalization condition in the Navy and appendicitis was the third most common cause of hospitalization in the Air Force (6%).

TABLE 2.41: DISTRIBUTION OF PRIMARY CAUSE CATEGORIES FOR HOSPITALIZATIONS DURING SECOND YEAR OF SERVICE AMONG ACTIVE COMPONENT ENLISTEES IN 2008–2012 VS. 2013 BY SERVICE

Category	Army		Navy		Marine Corps		Air Force	
	2008-2012 (%) [*]	2013 (%) [*]	2008-2012 (%) [*]	2013 (%) [*]	2008-2012 (%) [*]	2013 (%) [*]	2008-2012 (%) [*]	2013 (%) [*]
Complications of pregnancy, childbirth, and the puerperium	29.2	30.6	39.5	34.5	17.0	18.7	39.0	24.5
Mental disorders	11.7	12.5	15.6	19.3	15.2	24.0	9.0	7.0
Fracture	7.9	5.9	3.2	3.4	10.4	5.0	2.3	3.4
Injuries	7.4	4.5	1.9	1.3	9.6	4.8	2.2	2.7
Psychoses	4.9	3.8	7.0	6.4	7.2	4.4	5.6	5.6
Nonspecific symptoms	3.1	2.5	2.8	2.0	3.1	2.6	3.5	3.4
Alcohol and drug dependence	2.6	2.6	3.1	3.9	3.3	2.6	1.9	2.5
Appendicitis	2.3	2.7	2.7	3.2	3.6	4.0	4.0	6.1
Poisoning and toxic effects	2.1	1.9	1.7	1.9	2.1	2.6	1.5	1.6
Complications of surgical and medical care, not elsewhere classified	1.9	1.7	1.1	0.8	1.4	2.1	1.8	1.6
Infections of skin and subcutaneous tissue	1.6	2.2	2.0	1.2	2.8	3.2	2.0	1.6
Total hospitalizations	9,899	2,133	4,505	1,042	3,881	755	1,808	444

^{*} % of total hospitalizations

Table 2.42 and Table 2.43 show the most common condition categories during the first and second year of service among reserve component enlistees by service. In Table 2.42, mental disorders in the first year of service was the most common condition category for hospitalization in 2013 in the Army (18%), Navy (22%), and the Air Force (21%; tied with psychoses), but not in the Marine Corps in which pneumonia and influenza (25%) was the most common cause of hospitalization. The Army, Navy, and Marine Corps saw an increase in 2013 in the percentage of hospitalizations attributed to mental disorders compared to the previous five year period. For Army Reserve enlistees, diseases of the oral cavity, salivary glands, and jaws (10%) and pneumonia and influenza (8%) were among the top three condition categories. In the Navy, appendicitis (13%) and nonspecific symptoms (9%) were the next most common conditions for hospitalization, and among Marine Corps Reserves, mental disorders (13%) and rheumatism (8%) were the next most common conditions. In the Air Force reserves, mental disorders (21%) and psychoses (21%) were the top most common cause of hospitalizations and nonspecific symptoms (11%) was the next most common cause in the first year of service.

TABLE 2.42: DISTRIBUTION OF PRIMARY CAUSE CATEGORIES FOR HOSPITALIZATIONS DURING FIRST YEAR OF SERVICE AMONG RESERVE COMPONENT ENLISTEES IN 2008–2012 VS. 2013 BY SERVICE

Category	Army		Navy		Marine Corps		Air Force	
	2008-2012 (%) [*]	2013 (%) [*]	2008-2012 (%) [*]	2013 (%) [*]	2008-2012 (%) [*]	2013 (%) [*]	2008-2012 (%) [*]	2013 (%) [*]
Pneumonia and influenza	13.3	7.5	3.3	4.3	19.3	25.2	4.1	3.6
Mental disorders	11.5	17.5	16.4	21.7	11.6	13.0	29.4	21.4
Infections of skin and subcutaneous tissue	6.8	2.5	3.3	0.0	15.4	6.5	4.1	3.6
Psychoses	6.6	5.0	3.3	0.0	2.3	0.8	6.6	21.4
Nonspecific symptoms	5.8	4.2	0.0	8.7	2.3	5.7	12.2	10.7
Fracture	4.8	3.3	8.2	4.3	2.8	2.4	3.0	3.6
Rheumatism, excluding the back	3.8	5.8	1.6	4.3	5.5	8.1	1.5	0.0
Diseases of the oral cavity, salivary glands, and jaws	3.0	10.0	0.0	0.0	2.5	0.8	5.1	0.0
Acute respiratory infections	2.6	0.8	1.6	0.0	1.2	0.0	1.0	0.0
Appendicitis	2.6	6.7	9.8	13.0	3.5	3.3	2.0	0.0
Injuries	2.6	5.0	0.0	0.0	1.3	2.4	1.5	0.0
Total hospitalizations	1,250	120	61	23	605	123	197	28

^{*} % of total hospitalizations

Table 2.43 shows the most common conditions requiring hospitalization during the second year of reserve component service. Among Army reserve enlistees in 2013, mental disorders (18%) and nonspecific symptoms were the most common cause of hospitalization in the second year of service. In the Navy in 2013, complications of pregnancy, childbirth, and the puerperium (25%) and mental disorders were the top two condition categories for hospitalization. There were only five hospitalization records for Marine Corps Reserves in the second year of service in 2013; however, the top conditions for 2008-2012 were mental disorders (19%), psychoses (11%), and infections of the skin and subcutaneous tissue (9%). The top condition category for the Air Force Reserve enlistees was complications of pregnancy, childbirth, and the puerperium (23%) in 2013. This is consistent with hospitalizations for the Air Force Reserves in 2008-2012.

TABLE 2.43: DISTRIBUTION OF PRIMARY CAUSE CATEGORIES FOR HOSPITALIZATIONS DURING SECOND YEAR OF SERVICE AMONG RESERVE COMPONENT ENLISTEES IN 2008–2012 VS. 2013 BY SERVICE

Category	Army		Navy		Marine Corps		Air Force	
	2008-2012 (%) [*]	2013 (%) [*]	2008-2012 (%) [*]	2013 (%) [*]	2008-2012 (%) [*]	2013 (%) [*]	2008-2012 (%) [*]	2013 (%) [*]
Mental disorders	17.7	17.5	6.8	18.8	18.9	0.0	2.8	0.0
Complications of pregnancy, childbirth, and the puerperium	7.7	2.5	43.2	25.0	0.0	0.0	22.2	23.1
Nonspecific symptoms	6.7	7.5	4.1	0.0	3.8	0.0	8.3	7.7
Pneumonia and influenza	6.2	2.5	2.7	0.0	0.0	0.0	0.0	0.0
Infections of skin and subcutaneous tissue	4.3	5.0	2.7	6.3	9.4	20.0	5.6	0.0
Psychoses	3.8	0.0	2.7	0.0	11.3	0.0	5.6	0.0
Diseases of esophagus, stomach, and duodenum	3.3	2.5	0.0	6.3	0.0	0.0	0.0	0.0
Poisoning and toxic effects	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diseases of the oral cavity, salivary glands, and jaws	2.4	5.0	0.0	0.0	1.9	0.0	5.6	0.0
Other diseases of digestive system	2.4	0.0	0.0	0.0	0.0	0.0	2.8	0.0
Intestinal infectious diseases	1.9	0.0	0.0	6.3	0.0	0.0	0.0	0.0
Total hospitalizations	209	40	74	16	53	5	36	13

^{*} % of total hospitalizations

Table 2.44 and Table 2.45 show the primary cause categories for hospitalization during the first and second year of service, respectively, among National Guard enlistees by service. As shown in Table 2.44, in 2013, mental disorders were the most common cause of hospitalization among both Army (14%) and Air (44%) National Guard enlistees. The percentage of hospitalizations due to mental disorders increased for both Army and Air National Guard compared to the previous five year period. Pneumonia and influenza (11%) and infections of skin and subcutaneous tissue (7%) were the other most common cause of hospitalization in the Army National Guard in the first year of service. Nonspecific symptoms (12%) and pneumonia and influenza (6%) were the most common cause of hospitalization among Air National Guard in the first year of service.

TABLE 2.44: DISTRIBUTION OF PRIMARY CAUSE CATEGORIES FOR HOSPITALIZATIONS DURING FIRST YEAR OF SERVICE AMONG NATIONAL GUARD ENLISTEES IN 2008–2012 VS. 2013 BY SERVICE

Category	Army		Air Force	
	2008-2012 (%) [*]	2013 (%) [*]	2008-2012 (%) [*]	2013 (%) [*]
Pneumonia and influenza	16.9	10.9	6.2	5.9
Mental disorders	11.2	13.8	23.5	44.1
Infections of skin and subcutaneous tissue	9.1	7.4	8.0	0.0
Fracture	5.5	3.4	4.9	2.9
Psychoses	5.4	4.6	3.1	2.9
Nonspecific symptoms	4.9	4.9	8.0	11.8
Injuries	3.5	1.7	2.5	0.0
Acute respiratory infections	2.8	2.0	1.9	0.0
Rheumatism, excluding the back	2.7	3.7	4.3	2.9
Osteopathies, chondropathies, and acquired musculoskeletal deformities	2.5	3.2	0.6	0.0
Total hospitalizations	2,251	349	162	34

^{*} % of total hospitalizations

Table 2.45 shows the causes for hospitalization in the second year of service for the National Guard. Mental disorders (15%), psychoses (10%), and infections of the skin and subcutaneous tissue (7%) were the most common causes of hospitalization among Army National Guard enlistees in the second year of service in 2013. The percentage for all three conditions increased compared to the previous five year period. The number of hospitalizations in the second year of service for the Air Guard was too small for comparisons in 2013. During the previous five year period, pneumonia and influenza (11%) and appendicitis (11%) were the top causes of hospitalizations.

TABLE 2.45: DISTRIBUTION OF PRIMARY CAUSE CATEGORIES FOR HOSPITALIZATIONS DURING SECOND YEAR OF SERVICE AMONG NATIONAL GUARD ENLISTEES IN 2008–2012 VS. 2013 BY SERVICE

Category	Army		Air Force	
	2008-2012 (%) [*]	2013 (%) [*]	2008-2012 (%) [*]	2013 (%) [*]
Mental disorders	11.9	14.6	0.0	0.0
Fracture	9.1	2.4	7.1	100.0
Pneumonia and influenza	8.6	3.7	10.7	0.0
Nonspecific symptoms	6.6	4.9	7.1	0.0
Injuries	6.2	3.7	3.6	0.0
Infections of skin and subcutaneous tissue	5.1	7.3	7.1	0.0
Psychoses	4.9	9.8	3.6	0.0
Appendicitis	3.8	1.2	10.7	0.0
Acute respiratory infections	2.4	0.0	0.0	0.0
Arthropathies and related disorders	2.4	0.0	7.1	0.0
Total hospitalizations	452	82	28	2

^{*} % of total hospitalizations

Attrition

Attrition is one of the key outcomes of interest to AMSARA. This section provides a description of attrition among first-time Active Duty enlisted accessions into the Army, Navy, Marines, and Air Force from 2008 to 2013. Tables 2.47-2.49 display the period-specific and cumulative probability of service member attrition at 90, 180, 365, and 730 days following accession by service, year of accession, sex, race, age at accession, education, Armed Forces Qualification Test (AFQT) percentile score at accession, and medical disqualification status. Censoring may result from a lack of full follow-up or from certain Defense Manpower Data Center (DMDC) transactions that result in the generation of a loss date but are not considered adverse events. The most common cause of non-attrition loss was expiration of term of service (1001), followed by disability with severance pay (1011) and other early releases (1008). Loss records generated for these events, noted in Table 2.46, were not counted among the attritions reported in Tables 2.47-2.49.

TABLE 2.46: INTERSERVICE SEPARATION CODE LOSS CATEGORIES EXCLUDED FROM ATTRITION

ISC Code	Description	ISC Code	Description
1000	Unknown or Invalid	1031	Death, Non-Battle - Disease
1001	Expiration of Term of Service	1032	Death, Non-battle - Other
1003	Early Release - To Attend School	1033	Death, NS
1004	Early Release – Police Duty	1040	Officer Commissioning Program
1005	Early Release - In the National Interest	1041	Warrant Officer Program
1006	Early Release – Seasonal Employment	1042	Military Service Academy
1007	Early Release – To Teach	1050	Retirement, 20-30 yrs of Service
1008	Early Release - Other (incl RIF/VSI/SSB)	1051	Retirement, Over 30 yrs of Service
1011	Disability - Severance Pay	1052	Retirement, Other Categories
1012	Permanent Disability - Retired	1100	Immediate Reenlistment
1013	Temporary Disability - Retired	1103	Record Correction
1014	Disability - Non EPTS - No Severance Pay	1104	Dropped from Strength as MIA/POW
1015	Disability - Title 10 Retirement	1105	Dropped from Strength, Other
1030	Death, Battle Casualty		

ISC: Interservice Separation Code; RIF: Reduction in force; VSI: voluntary separation initiative; SSB: special separation benefit; MIA: missing in action; POW: prisoner of war

Table 2.47 shows the period specific attrition percent as well as the cumulative attrition percent at 90, 180, 365, and 730 days following accession onto enlisted active duty from 2008-2013. Overall attrition in enlisted active duty accessions in the first two years of service was about 14%. About half of the attrition that occurs during the first two years of service occurs in the first 90 days of service (7%).

Overall, the Marine Corps and the Air Force had the lowest percent attrition (12%) at two years of service while the Army had the highest attrition (17%). Attrition in the first 90 days of service was highest in the Navy (8%) and lowest in the Air Force (5%). At 180 days, the percent of attrition was similar across services, with Army and Navy having the highest (10%), followed by Marine Corps (8%) and the Air Force (7%). The patterns of cumulative attrition percent after one year of service was similar to the pattern observed at two years.

When examined by year of accession, cumulative attrition was highest at all time points in those who accessed in 2008 and 2009. In 2010 and 2011, the attrition rate decreased slightly at each time point before increasing again in 2012. Two years of complete follow up time were not available for all 2012 and 2013 accessions. Therefore, attrition rates are not provided for 2012 accessions after 365 days and are not provided for 2013 accessions after 180 days.

The proportion of accessions lost is consistently higher at all points of follow-up for females relative to males. Whites had the highest proportion of losses among accessions at all points of follow up, from 90 days (7%) through 2 years (18.1%).

Attrition rates at all points of follow-up were similar when comparing age at accession. When attrition was examined by education level it was found that enlistees with higher levels of education had lower rates of attrition. Those with a bachelor degree and above consistently had the lowest proportion of losses among accessions at all points of follow-up. Those without a high school diploma had the highest rates of attrition at all points of follow-up. Attrition rates by AFQT percentile scores followed a pattern similar to education. The proportion lost at all points of follow-up was lowest for the highest percentile score group (93-99) and highest in the lowest percentile score group.

At all points of follow up, the attrition rates were lowest among fully qualified accessions. At 90 days, attrition was highest among those with a permanent medical disqualification. After 90 days the rate of attrition among those with temporary and permanent disqualifications was similar and higher than the attrition rate among fully qualified accessions until the second year of service. In the second year of service (days 366-730) the attrition rate was highest among those with a temporary medical disqualification but similar among permanently disqualified and fully qualified accessions.

TABLE 2.47: ATTRITION AMONG FIRST TIME ACTIVE COMPONENT ENLISTED ACCESSIONS IN 2008-2013 BY DAYS SINCE ACCESSION: ALL SERVICES

	Days 0-90 Attrition			Days 91-180 Attrition		Days 181-365 Attrition		Days 366-730 Attrition	
	Accessed (n)	n	Period% (Cumul%)	n	Period% (Cumul%)	n	Period% (Cumul%)	n	Period% (Cumul%)
Service									
Army	378,325	25,357	6.7 (6.7)	12,147	3.4 (10.1)	10,005	2.9 (13.1)	15,506	4.7 (17.8)
Navy	215,416	18,158	8.4 (8.4)	2,823	1.4 (9.9)	4,292	2.2 (12.1)	5,895	3.1 (15.2)
Marine Corps	192,837	12,633	6.6 (6.6)	2,903	1.6 (8.2)	3,499	2.0 (10.1)	4,187	2.4 (12.5)
Air Force	171,149	8,413	4.9 (4.9)	3,827	2.4 (7.3)	3,945	2.5 (9.7)	4,655	3.0 (12.8)
FY of Accession									
2008	162,700	12,243	7.5 (7.5)	4,446	3 (10.5)	5,409	3.7 (14.2)	7,981	5.7 (19.9)
2009	161,061	11,586	7.2 (7.2)	3,896	2.6 (9.8)	4,721	3.2 (13.0)	6,803	4.8 (17.9)
2010	159,745	10,173	6.4 (6.4)	3,830	2.6 (8.9)	3,744	2.6 (11.5)	6,407	4.5 (16.0)
2011	152,658	9,703	6.4 (6.4)	3,583	2.5 (8.9)	3,473	2.5 (11.4)	6,367	4.7 (16.0)
2012 ⁺	155,658	11,265	7.2 (7.2)	3,320	2.3 (9.5)	3,529	2.5 (12.0)	-	-
2013 ⁺	165,905	9,594	5.8 (5.8)	2,625	1.7 (7.5)	-	-	-	-
Sex [*]									
Male	800,783	48,978	6.1 (6.1)	16,272	2.2 (8.3)	16,990	2.3 (10.6)	24,102	3.4 (13.9)
Female	156,943	15,586	9.9 (9.9)	5,428	3.8 (13.8)	4,751	3.5 (17.3)	6,141	4.7 (21.9)
Age at Accession [*]									
17 – 20	617,611	42,306	6.8 (6.8)	14,685	2.6 (9.4)	15,704	2.8 (12.2)	21,780	4 (16.2)
21 – 25	268,560	17,321	6.4 (6.4)	5,484	2.2 (8.6)	4,812	2.0 (10.6)	6,859	2.8 (13.4)
> 25	71,551	4,935	6.9 (6.9)	1,531	2.3 (9.2)	1,225	1.9 (11.1)	1,604	2.5 (13.6)
Race [*]									
White	713,012	49,190	6.9 (6.9)	16,454	2.5 (9.4)	16,493	2.5 (11.9)	21,819	3.5 (15.4)
Black	156,158	9,397	6.0 (6.0)	3,433	2.3 (8.4)	3,254	2.3 (10.6)	5,902	4.2 (14.8)
Other	88,557	5,977	6.7 (6.7)	1,813	2.2 (8.9)	1,994	2.5 (11.4)	2,522	3.2 (14.6)
Education Level [*]									
Below HS graduate ^{**}	3,530	309	8.8 (8.8)	192	6 (14.7)	172	5.7 (20.4)	305	10.7 (31.1)
HS diploma	828,362	56,863	6.9 (6.9)	19,028	2.5 (9.3)	19,377	2.6 (11.9)	27,079	3.7 (15.6)
Some college	76,234	5,048	6.6 (6.6)	1,814	2.5 (9.2)	1,557	2.2 (11.4)	2,252	3.3 (14.7)
Bachelor's or higher	49,508	2,335	4.7 (4.7)	659	1.4 (6.1)	621	1.3 (7.4)	607	1.3 (8.8)
AFQT Score [*]									
93 – 99	66,657	3,050	4.6 (4.6)	1,041	1.6 (6.2)	989	1.6 (7.8)	1,281	2.1 (9.9)
65 – 92	380,529	23,501	6.2 (6.2)	7,346	2.1 (8.2)	8,353	2.4 (10.6)	10,224	3.0 (13.6)
50 – 64	261,164	18,607	7.1 (7.1)	6,099	2.5 (9.6)	6,480	2.7 (12.4)	8,853	3.8 (16.2)
30 – 49	236,313	18,116	7.7 (7.7)	6,914	3.2 (10.8)	5,613	2.7 (13.5)	9,569	4.7 (18.1)
11 – 29	5,461	970	17.8 (17.8)	249	5.5 (23.3)	178	4.2 (27.5)	242	6.0 (33.5)
Medical Status									
Fully Qualified	829,183	52,990	6.4 (6.4)	17,763	2.3 (8.7)	18,656	2.5 (11.1)	25,895	3.5 (14.6)
Temporary DQ	43,544	3,612	8.3 (8.3)	1,480	3.7 (12)	1,256	3.3 (15.3)	1,875	5.0 (20.3)
Permanent DQ	85,000	7,962	9.4 (9.4)	2,457	3.2 (12.6)	1,829	2.5 (15.0)	2,473	3.4 (18.4)
Total ⁺	957,727	64,564	6.7 (6.7)	21,700	2.4 (9.2)	21,741	2.5 (11.7)	30,243	3.6 (15.2)

FY: Fiscal Year; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification

* Individuals with missing values for demographic variables are included in the total

[†]Attrition is not calculated after 365 days among 2012 accessions or after 180 days in 2013 accessions due to lack of sufficient follow up time.

** Encompasses the following three cases: 1) one who is pursuing completion of the GED or other test based high school equivalency diploma, vocational school, or secondary school, etc.; 2) one who is not attending high school and who is neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school but is not yet a senior.

Table 2.48 shows the period-specific attrition percent as well as the cumulative attrition percent at 90, 180, 365, and 730 days following accession onto enlisted reserve from 2008-2013. Attrition rates presented for enlisted reserve accessions are likely under estimated as the majority of discharges from enlisted reserve service are accompanied by an ISC that indicates the reason for separation was unknown and thus not considered attrition by AMSARA. Overall attrition in enlisted reserve accessions in the first two years of service was about 5%. About half of the attrition that occurs during the first two years of service occurs in the first 180 days of service (2.7%).

Overall, the Marine Corps and the Air Force had the highest percent attrition (10-11%) at two years of service while the Navy has the lowest attrition (1.6%). Attrition in the first 90 days of service was highest in the Marine Corps (6%) and lowest in the Army and Navy (~0.5%). At 365 days, the percent of attrition was similar in the Marine Corps and Air Force (8%), with lower rates observed in the Army (2.5%) and Navy (1.2%). The patterns of cumulative attrition percent after one year of service was similar to the pattern observed at two years.

When examined by year of accession, cumulative attrition did not vary substantially regardless of the time period of attrition. Two years of complete follow up time were not available for all 2012 and 2013 accessions. Therefore, attrition rates are not provided for 2012 accessions after 365 days and are not provided for 2013 accessions after 180 days.

The proportion of accessions lost is similar in males and females until in the first 180 days of service. After the first 180 days of service females have higher rates of attrition relative to males. Attrition was comparable among Black and White enlisted reserves. Individuals within other race categories had lower attrition than both Black and White reservists regardless of the time of attrition.

Attrition rates at 90 days were similar when comparing age at accession. After 90 days those over the age of 25 had slightly higher attrition rates in each time period. When attrition was examined by education level it was found that enlistees with higher levels of education had lower rates of attrition. Those with a bachelor degree and above consistently had the lowest proportion of losses among accessions at all points of follow-up. Attrition rates by AFQT percentile scores followed a pattern similar to education.

At all points of follow up, the attrition rates were lowest among fully qualified accessions. At 90 days, attrition was highest among those with a permanent medical disqualification. After 90 days the rate of attrition among those with temporary and permanent disqualifications was similar and higher than the attrition rate among fully qualified accessions.

TABLE 2.48: ATTRITION AMONG FIRST TIME RESERVE COMPONENT ENLISTED ACCESSIONS IN 2008-2013 BY DAYS SINCE ACCESSION: ALL SERVICES

	Days 0-90 Attrition			Days 91-180 Attrition		Days 181-365 Attrition		Days 366-730 Attrition	
	Accessed (n)	n	Period% (Cumul%)	n	Period% (Cumul%)	n	Period% (Cumul%)	n	Period% (Cumul%)
Service									
Army	102,634	391	0.4 (0.4)	1,094	1.1 (1.5)	1,078	1.1 (2.5)	287	0.3 (2.8)
Navy	18,799	120	0.6 (0.6)	33	0.2 (0.8)	66	0.4 (1.2)	88	0.5 (1.6)
Marine Corps	31,516	1,897	6.0 (6.0)	378	1.3 (7.3)	255	0.9 (8.2)	746	2.6 (10.7)
Air Force	21,079	219	1.0 (1.0)	589	2.8 (3.9)	928	4.6 (8.4)	561	2.9 (11.3)
FY of Accession									
2008	35,449	554	1.6 (1.6)	479	1.4 (2.9)	426	1.2 (4.2)	320	0.9 (5.1)
2009	34,969	541	1.5 (1.5)	469	1.4 (2.9)	465	1.4 (4.3)	379	1.1 (5.4)
2010	28,132	467	1.7 (1.7)	342	1.2 (2.9)	509	1.9 (4.8)	466	1.7 (6.5)
2011	30,305	402	1.3 (1.3)	374	1.3 (2.6)	477	1.6 (4.2)	350	1.2 (5.4)
2012 [†]	24,150	339	1.4 (1.4)	284	1.2 (2.6)	405	1.7 (4.3)	-	-
2013 [†]	21,023	324	1.5 (1.5)	146	0.7 (2.2)	-	-	-	-
Sex [*]									
Male	133,972	2,198	1.6 (1.6)	1,302	1.0 (2.6)	1,444	1.1 (3.7)	1,374	1.1 (4.8)
Female	40,056	429	1.1 (1.1)	792	2.0 (3.1)	883	2.3 (5.3)	308	0.8 (6.2)
Age at Accession [*]									
17 – 20	105,611	1,710	1.6 (1.6)	1,236	1.2 (2.8)	1,477	1.4 (4.2)	1,164	1.2 (5.4)
21 – 25	42,998	679	1.6 (1.6)	556	1.3 (2.9)	538	1.3 (4.2)	381	0.9 (5.1)
> 25	14,801	237	1.6 (1.6)	300	2.1 (3.7)	310	2.2 (5.8)	137	1.0 (6.8)
Race [*]									
White	127,320	2,127	1.7 (1.7)	1,529	1.2 (2.9)	1,708	1.4 (4.3)	1,247	1.0 (5.3)
Black	34,031	385	1.1 (1.1)	488	1.5 (2.6)	500	1.5 (4.1)	343	1.1 (5.1)
Other	12,677	115	0.9 (0.9)	77	0.6 (1.5)	119	1.0 (2.5)	92	0.7 (3.2)
Education Level [*]									
Below HS graduate ^{**}	8,962	4	0.0 (0.0)	74	0.8 (0.9)	85	1.0 (1.8)	46	0.5 (2.4)
HS diploma	136,150	2,325	1.7 (1.7)	1,671	1.2 (3.0)	1,810	1.4 (4.3)	1,450	1.1 (5.4)
Some college	18,755	208	1.1 (1.1)	268	1.4 (2.6)	319	1.7 (4.3)	134	0.7 (5.0)
Bachelor's or higher	10,143	88	0.9 (0.9)	81	0.8 (1.7)	111	1.1 (2.8)	52	0.5 (3.3)
AFQT Score [*]									
93 – 99	10,522	131	1.2 (1.2)	67	0.6 (1.9)	97	0.9 (2.8)	88	0.9 (3.7)
65 – 92	63,346	940	1.5 (1.5)	653	1.0 (2.5)	768	1.2 (3.8)	555	0.9 (4.7)
50 – 64	43,814	695	1.6 (1.6)	572	1.3 (2.9)	630	1.5 (4.4)	478	1.1 (5.5)
30 – 49	50,149	807	1.6 (1.6)	765	1.6 (3.2)	759	1.6 (4.7)	540	1.1 (5.9)
11 – 29	1,921	23	1.2 (1.2)	22	1.2 (2.4)	27	1.4 (3.8)	15	0.8 (4.6)
Medical Status									
Fully Qualified	150,084	2,139	1.4 (1.4)	1,686	1.1 (2.6)	1,935	1.3 (3.9)	1,459	1.0 (4.9)
Temporary DQ	8,929	150	1.7 (1.7)	161	1.8 (3.5)	162	1.9 (5.4)	104	1.2 (6.6)
Permanent DQ	15,015	338	2.3 (2.3)	247	1.7 (3.9)	230	1.6 (5.5)	119	0.8 (6.4)
Total	174,028	2,627	1.5 (1.5)	2,094	1.2 (2.7)	2,327	1.4 (4.1)	1,682	1.0 (5.1)

FY: Fiscal Year; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification

* Individuals with missing values for demographic variables are included in the total

[†] Attrition is not calculated after 365 days among 2012 accessions or after 180 days in 2013 accessions due to lack of sufficient follow up time.

** Encompasses the following three cases: 1) one who is pursuing completion of the GED or other test based high school equivalency diploma, vocational school, or secondary school, etc.; 2) one who is not attending high school and who is neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school but is not yet a senior.

Table 2.49 shows the period-specific attrition percent as well as the cumulative attrition percent at 90, 180, 365, and 730 days following accession onto enlisted National Guard service from 2008-2013. Attrition rates presented for enlisted National Guard accessions are likely underestimated as the majority of discharges from enlisted National Guard service are accompanied by an ISC that indicates the reason for separation was unknown and thus not considered attrition by AMSARA. A relatively small number of personnel met AMSARA criteria for attrition in the first two years of service; less than 1% of the total National Guard population regardless of time period. Therefore, no conclusions can be drawn with respect attrition among National Guard service members.

TABLE 2.49: ATTRITION AMONG FIRST TIME NATIONAL GUARD COMPONENT ENLISTED ACCESSIONS IN 2008-2013 BY DAYS SINCE ACCESSION: ALL SERVICES

	Days 0-90 Attrition			Days 91-180 Attrition			Days 181-365 Attrition			Days 366-730 Attrition		
	Accessed (n)	n	Period% (Cumul%)	n	Period% (Cumul%)	n	Period% (Cumul%)	n	Period% (Cumul%)	n	Period% (Cumul%)	
Service												
Army	226,724	4	<0.1 (<0.1)	19	<0.1 (<0.1)	39	<0.1 (<0.1)	33	<0.1 (<0.1)			
Air Force	30,061	18	0.1 (0.1)	100	0.3 (0.4)	486	1.6 (2.0)	966	3.3 (5.3)			
FY of Accession												
2008	53,478	7	<0.1 (<0.1)	29	0.1 (0.1)	147	0.3 (0.3)	303	0.6 (0.9)			
2009	47,136	3	<0.1 (<0.1)	30	0.1 (0.1)	139	0.3 (0.4)	296	0.6 (1.0)			
2010	46,027	5	<0.1 (<0.1)	9	<0.1 (<0.1)	88	0.2 (0.2)	212	0.5 (0.7)			
2011	40,109	3	<0.1 (<0.1)	24	0.1 (0.1)	88	0.2 (0.3)	131	0.3 (0.6)			
2012 [†]	41,988	3	<0.1 (<0.1)	16	<0.1 (<0.1)	63	0.2 (0.2)	-	- (0.2)			
2013 [†]	28,047	1	<0.1 (<0.1)	1	<0.1 (<0.1)	0	-	-	- (<0.1)			
Sex*												
Male	204,303	13	<0.1 (<0.1)	83	<0.1 (<0.1)	366	0.2 (0.2)	725	0.4 (0.6)			
Female	52,480	9	<0.1 (<0.1)	36	0.1 (0.1)	159	0.3 (0.4)	274	0.5 (0.9)			
Age at Accession*												
17 – 20	161,537	8	<0.1 (<0.1)	66	<0.1 (<0.1)	305	0.2 (0.2)	548	0.3 (0.6)			
21 – 25	61,111	7	<0.1 (<0.1)	38	0.1 (0.1)	139	0.2 (0.3)	280	0.5 (0.8)			
> 25	33,595	7	<0.1 (<0.1)	15	<0.1 (0.1)	81	0.2 (0.3)	171	0.5 (0.8)			
Race*												
White	208,197	20	<0.1 (<0.1)	99	<0.1 (0.1)	431	0.2 (0.3)	830	0.4 (0.7)			
Black	38,229	1	<0.1 (<0.1)	11	<0.1 (<0.1)	67	0.2 (0.2)	140	0.4 (0.6)			
Other	10,359	1	<0.1 (<0.1)	9	0.1 (0.1)	27	0.3 (0.4)	29	0.3 (0.6)			
Education Level*												
Below HS graduate**	24,432	0	-	0	-	8	<0.1 (<0.1)	6	<0.1 (0.1)			
HS diploma	183,020	17	<0.1 (<0.1)	100	0.1 (0.1)	455	0.2 (0.3)	851	0.5 (0.8)			
Some college	35,453	3	<0.1 (<0.1)	13	<0.1 (<0.1)	34	0.1 (0.1)	86	0.2 (0.4)			
Bachelor's or higher	13,868	2	<0.1 (<0.1)	6	<0.1 (0.1)	28	0.2 (0.3)	56	0.4 (0.7)			
AFQT Score*												
93 – 99	15,603	0	-	6	<0.1 (<0.1)	20	0.1 (0.2)	50	0.3 (0.5)			
65 – 92	91,896	9	<0.1 (<0.1)	36	<0.1 (<0.1)	189	0.2 (0.3)	373	0.4 (0.7)			
50 – 64	66,048	6	<0.1 (<0.1)	42	0.1 (0.1)	134	0.2 (0.3)	275	0.4 (0.7)			
30 – 49	76,994	7	<0.1 (<0.1)	34	<0.1 (0.1)	178	0.2 (0.3)	286	0.4 (0.7)			
11 – 29	3,179	0	-	-	-	1	<0.1 (<0.1)	-	- (<0.1)			
Medical Status												
Fully Qualified	218,954	20	<0.1 (<0.1)	96	<0.1 (0.1)	438	0.2 (0.3)	850	0.4 (0.6)			
Temporary DQ	17,715	0	-	7	<0.1 (<0.1)	42	0.2 (0.3)	77	0.4 (0.7)			
Permanent DQ	20,116	2	<0.1 (<0.1)	16	0.1 (0.1)	45	0.2 (0.3)	72	0.4 (0.7)			
Total	256,785	22	<0.1 (<0.1)	119	<0.1 (0.1)	525	0.2 (0.3)	999	0.4 (0.6)			

FY: Fiscal Year; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification

[†] Individuals with missing values for demographic variables are included in the total

* Attrition is not calculated after 365 days among 2012 accessions or after 180 days in 2013 accessions due to lack of sufficient follow up time.

** Encompasses the following three cases: 1) one who is pursuing completion of the GED or other test based high school equivalency diploma, vocational school, or secondary school, etc.; 2) one who is not attending high school and who is neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school but is not yet a senior

EPTS Discharges

Discharges for medical conditions that existed prior to service (EPTS) are of vital interest to AMSARA. A discharge can be classified as EPTS if the condition was verified to have existed before the recruit began service and if the complications leading to discharge arose no more than 180 days after the recruit began duty. EPTS data reporting has varied by site and over time – see Data Sources section for details (Table 3.1).

Part I summarizes the EPTS records provided to AMSARA, regardless of whether a corresponding accession record is available. EPTS records for active, reserve, and National Guard components are included. Part II only summarizes records for which a corresponding accession record is available. Due to the significant differences in the population between active, reserve, and National Guard components, results in Part II are stratified by component.

Part I: EPTS discharges irrespective of accession record

The number of EPTS discharge records by service branch, component, and year of discharge are shown for the period between 2008 and 2012 in Table 2.50. Numbers for each service and component often differ considerably from year to year. Fluctuations in the numbers of reported EPTS discharges are also apparent for active component Army, Marine Corps, and Air Force. Army reported EPTS discharges from active component varied from 830 in 2012 to 1,965 in 2008. Air Force reported EPTS discharges from active component ranged from 357 in 2012 to 1,044 in 2008. Marine Corps EPTS discharge counts vary from 573 in 2012 to 1,176 in 2008.

TABLE 2.50: EPTS DISCHARGES OF ENLISTEES IN 2008–2012 BY SERVICE, COMPONENT, AND YEAR

Service	Component	2008	2009	2010	2011	2012	Total
Army	Active	1,965	1,424	1,528	1,820	830	7,567
	National Guard	711	657	666	918	341	3,293
	Reserve	357	262	207	276	88	1,190
Navy	Active	1,698	1,420	1,447	1,384	1,727	7,676
	Reserve	187	112	83	120	136	638
Marine Corps	Active	1,176	713	667	759	573	3,888
	Reserve	119	90	105	102	81	497
Air Force	Active	1,044	570	597	557	357	3,125
	National Guard	0	4	4	2	1	11
	Reserve	79	60	79	96	51	365
Total		7,336	5,312	5,383	6,034	4,185	28,250

EXISTED PRIOR TO SERVICE

Table 2.51 shows EPTS discharges between 2008 and 2012 for each branch of service by medical categories defined by US Military Entrance Processing Command (USMEPCOM). The results are sorted according to the numbers of discharges from the Army, the largest service with the most reported EPTS discharges. Psychiatric discharges were the most common cause of EPTS discharges in the Army, accounting for 29.4% of all EPTS discharges, and in the Marine Corps, accounting for 41.6% of all EPTS discharges. Other orthopedic conditions were the most common cause of EPTS discharge in the Navy, accounting for 14.0% of discharges. Orthopedic conditions of the feet were the most common reason for EPTS discharge in the Air Force and accounted for 16/3% of all discharges. As a group, orthopedic conditions, including knee, back, feet, general, and other, account about 40% of discharges from the Army. All orthopedic conditions were also leading causes of EPTS discharge in the Navy (46%), Marine Corps (28%), and Air Force (58%). The observed differences in EPTS discharge category frequencies may be due in part to differences in how each service categorizes and reports EPTS discharges, particularly discharges for psychiatric conditions (Army and Air Force). Accordingly, differences across services may reflect procedural differences more than true EPTS rates, and any comparisons across services should be made cautiously.

TABLE 2.51: EPTS DISCHARGES OF ENLISTEES IN 2008–2012 BY CATEGORY AND SERVICE: ALL COMPONENTS

Condition	Army		Navy		Marine Corps		Air Force	
	n	%	n	%	n	%	n	%
Psychiatric - other	3,547	29.4	440	5.3	1,823	41.6	24	0.7
Ortho - other	1,443	12.0	1,162	14.0	293	6.7	375	10.7
Ortho - back	1,144	9.5	678	8.2	193	4.4	298	8.5
Ortho - knee	986	8.2	775	9.3	178	4.1	487	13.9
Asthma	946	7.9	865	10.4	433	9.9	417	11.9
Other - general	750	6.2	864	10.4	489	11.2	284	8.1
Ortho - feet	528	4.4	355	4.3	57	1.3	572	16.3
G-U (Incl. pregnancy)	456	3.8	464	5.6	151	3.4	130	3.7
Neurology - other	320	2.7	696	8.4	187	4.3	328	9.4
Abdomen and viscera	311	2.6	279	3.4	96	2.2	132	3.8
All other categories	1,499	12.4	1,702	20.5	420	9.6	401	11.5
Other/Missing	120	1.0	34	0.4	65	1.5	53	1.5
Total	12,050		8,314		4,385		3,501	

Table 2.52 shows the 10 most common conditions leading to EPTS discharge for all Army enlistees in 2012, compared to the prevalence of EPTS discharges due to these conditions in 2008-2011. In 2012, back pain, lower leg pain, deformities, or disease, adjustment disorders, and asthma were the leading causes of EPTS discharges. The observed prevalence of EPTS discharges for the leading conditions in 2012 was generally similar to the prevalence of conditions observed in the period from 2008 to 2011. However, discharges for back pain increased in prevalence from 5.1% in 2008 to 2011 to 8.1% in 2012, and discharges for adjustment disorder disorders increased from 3.4% of all discharges to 6.4%. EPTS discharges for depressive disorders decreased in prevalence in 2012, to 3.5% of all discharges from 8.4% in 2008 to 2011.

TABLE 2.52: LEADING PRIMARY EPTS DISCHARGE CONDITIONS FOR ALL ENLISTEES IN 2008-2011 VS. 2012: ARMY

Primary EPTS condition	2008-2011		2012	
	n	%	n	%
Back pain	548	5.1	102	8.1
Lower leg pain, deformities, and disease (includes shin splints)	654	6.1	87	6.9
Adjustment disorders	362	3.4	81	6.4
Asthma	877	8.1	81	6.4
Depressive disorder, not elsewhere class	906	8.4	44	3.5
Shoulder pain, disease, injury (current)	260	2.4	43	3.4
Hearing deficiency	110	1.0	41	3.3
Ankle or foot pain, deformities or disease	301	2.8	40	3.2
Deviation or curvature of spine	188	1.7	33	2.6
Keratoconus of any degree	109	1.0	31	2.5
All other EPTS discharge conditions	6,476	40.0	676	46.3
Total for EPTS discharge conditions	10,791		1,259	

EPTS: Existed Prior to Service

Table 2.53 shows the 10 most common conditions leading to EPTS discharge for all Navy enlistees in 2012, compared to the prevalence of the same conditions in 2008-2011. In 2012, asthma, migraines and lower leg pain, deformities, and disease were the leading cause of EPTS discharge. The prevalence of EPTS discharges for hepatitis chronic current (3.4%) and ankle or foot pain, deformities or disease (3.1%) were both higher in 2012 than in previous years.

TABLE 2.53: LEADING PRIMARY EPTS DISCHARGE CONDITIONS FOR ALL ENLISTEES IN 2008-2011 VS. 2012: NAVY

Primary EPTS condition	2008-2011		2012	
	n	%	n	%
Asthma	682	10.6	188	10.1
Headaches, migraines	210	3.3	149	8.0
Lower leg pain, deformities, and disease (includes shin splints)	582	9.0	140	7.5
Back pain	306	4.7	64	3.4
Hepatitis chronic current or hepatitis carrier state	54	0.8	63	3.4
Ankle or foot pain, deformities or disease	153	2.4	58	3.1
Headaches, recurrent	199	3.1	57	3.1
Chest pain	230	3.6	56	3.0
Deviation or curvature of spine	164	2.5	48	2.6
Syncope: blackout, fainting, vasovagal attack, Gowers syndrome. Alteration of consciousness, frequent loss of consciousness	112	1.7	44	2.4
All other EPTS discharge conditions	3,759	41.7	996	46.5
Total for EPTS discharge conditions	6,451		1,863	

EPTS: Existed Prior to Service

Table 2.54 shows the 10 most common conditions leading to EPTS discharge for all Marine Corps enlistees in 2012, compared to the prevalence of the same conditions in 2008-2011. In 2012, suicidal behavior, asthma, and depressive disorders were the leading cause of EPTS discharge. The observed prevalence of EPTS discharges for the leading conditions in 2012 was generally similar to the prevalence of conditions observed in the period from 2008 to 2011. However, the prevalence of EPTS discharges for ADD/ADHD, 5.4%, alcohol abuse 4.3% both increased in 2012 than in previous years.

TABLE 2.54: LEADING PRIMARY EPTS DISCHARGE CONDITIONS FOR ALL ENLISTEES IN 2008-2011 VS. 2012: MARINE CORPS

Primary EPTS condition	2008-2011		2012	
	n	%	n	%
Suicidal behavior, gesture or attempt	152	4.1	66	10.1
Asthma	382	10.2	61	9.3
Depressive disorder, not elsewhere classified	435	11.7	51	7.8
ADD/ADHD	96	2.6	35	5.4
Alcohol Abuse	16	0.4	28	4.3
Lower leg pain, deformities, and disease (includes shin splints)	89	2.4	26	4.0
Anaphylaxis to venom, including stinging insects	90	2.4	20	3.1
Hepatitis chronic current or hepatitis carrier state	16	0.4	14	2.1
Nondependent abuse (include cannabis marijuana and hashish)	15	0.4	14	2.1
Jaw diseases current or associated tissues	15	0.4	14	2.1
All other EPTS discharge conditions	2,425	35.0	325	50.3
Total for EPTS discharge conditions	3,731		654	

EPTS: Existed Prior to Service

Table 2.55 shows the 10 most common conditions leading to EPTS discharge for all enlistees the Air Force in 2012, compared to prevalence of the same condition 2008-2011. In 2012, headaches, lower leg pain, deformities, or disease, and back pain, were the leading causes of EPTS discharges. The prevalence of EPTS discharges for back pain (7.3%) ankle or foot pain, deformities, or disease (5.1%) both increased in 2012 relative to previous years. The prevalence discharges due to lower leg pain, deformities, and diseases decreased in 2012 (7.3%) relative to previous years.

TABLE 2.55: LEADING PRIMARY EPTS DISCHARGE CONDITIONS FOR ALL ENLISTEES IN 2008-2011 VS. 2012: AIR FORCE

Primary EPTS condition	2008-2011		2012	
	n	%	n	%
Headaches, migraines	197	6.4	30	7.3
Lower leg pain, deformities, and disease (includes shin splints)	398	12.9	30	7.3
Back pain	135	4.4	30	7.3
Asthma	390	12.6	29	7.1
Ankle or foot pain, deformities or disease	66	2.1	21	5.1
Pes planus, congenital or acquired	375	12.1	19	4.6
Deviation or curvature of spine	102	3.3	13	3.2
Atopic dermatitis current or history	5	0.2	10	2.4
Syncope: blackout, fainting, vasovagal attack, Gowers syndrome. Alteration of consciousness, frequent loss of consciousness	24	0.8	9	2.2
Chest pain	38	1.2	8	2.0
All other EPTS discharge conditions	1,362	56.0	210	48.7
Total for EPTS discharge conditions	3,092		409	

EPTS: Existed Prior to Service

Part II: EPTS discharges with an accession record

EPTS discharges among all enlistees who accessed during 2008-2012 are summarized in Tables 2.56 to 2.61. Note that all references to years refer to the year of accession rather than the year of discharge. Discharge numbers reflect only discharges occurring among individuals with an accession record in the specific year. As mentioned, an EPTS condition must be identified within the first 180 days of service; if the service member is hospitalized at 180 days of service, their EPTS discharge may not occur until after their hospital discharge.

Relative risks are used to compare the likelihood of EPTS discharge between demographic groups. The baseline group chosen for each comparison depends on the factor being considered. For factors with some inherent order (e.g., age group, which ranges from younger to older) it is the first or last group in that order, as appropriate. Otherwise, the baseline group is generally the largest group. All comparisons, particularly those by service branch, should be taken in light of EPTS data reporting fluctuations by service and over time (see “Data Sources” for details).

Table 2.56 shows EPTS discharges reported among individuals accessed into enlisted active component service during each year from 2008 through 2012. EPTS discharge data for 2012 are not complete due to delays in reporting; therefore the total discharges are less than expected. The number of EPTS discharges reported in 2008 through 2012 is decreasing as well as the percent of accessions receiving an EPTS discharge.

TABLE 2.56: EPTS DISCHARGES FROM ACTIVE COMPONENT BY ACCESSION YEAR: ALL SERVICES

Year of accession	Accessions (n)	Discharged (n)	Discharged (%)
2008	251,627	6,073	2.4
2009	243,166	4,599	1.9
2010	233,904	4,805	2.1
2011	223,072	5,260	2.4
2012	221,796	3,809	1.7
Total	1,173,565	24,546	

Table 2.57 shows EPTS discharges reported among individuals accessed into enlisted reserve component service during each year from 2008 through 2012. EPTS discharge data for 2012 are not complete due to delays in reporting; therefore the total discharges are less than expected. The number of EPTS discharges and the percent of accessions receiving an EPTS discharge from the reserve component in 2008 through 2012 has remained relatively consistent.

TABLE 2.57: EPTS DISCHARGES FROM RESERVE COMPONENT BY ACCESSION YEAR: ALL SERVICES

Year of accession	Accessions (n)	Discharged (n)	Discharged (%)
2008	35,449	490	1.4
2009	34,969	423	1.2
2010	28,132	404	1.4
2011	30,305	450	1.5
2012	24,150	162	0.7
Total	153,005	1,929	

Table 2.58 shows EPTS discharges reported among individuals accessed into enlisted reserve component service during each year from 2008 through 2012. EPTS discharge data for 2012 are not complete due to delays in reporting; therefore the total discharges are less than expected. The number of EPTS discharges and the percent of accessions receiving an EPTS discharge from the reserve component in 2008 through 2012 has remained relatively consistent.

TABLE 2.58: EPTS DISCHARGES FROM NATIONAL GUARD BY ACCESSION YEAR: ALL SERVICES

Year of accession	Accessions (n)	Discharged (n)	Discharged (%)
2008	53,478	601	1.1
2009	47,136	536	1.1
2010	46,027	744	1.6
2011	40,109	669	1.7
2012	41,988	290	0.7
Total	228,738	2,840	

Characteristics of enlisted active component accessions that ended in EPTS discharge are shown in Table 2.59. The Marine Corps and Air Force had similar risks of EPTS discharge, which were not significantly different from the risk of EPTS discharge in the Army. Risk of EPTS discharge among Navy was the highest of any service and significantly elevated relative to the Army. The risk of EPTS discharge is significantly higher among females relative to males. Risk of EPTS discharge in those aged 21-25 was significantly lower than among those aged 17-20. No significant differences were observed when comparing EPTS discharge risk in blacks relative to whites though risk of EPTS discharge was significantly elevated in those in other race groups. Enlistees entering onto active duty service with some college or a bachelor's degree had significantly lower risk of EPTS discharge relative to high school graduates. Relative to the highest percentile Armed Forces Qualification Test (AFQT) score group all other AFQT score groups were associated with significantly higher EPTS discharge risk. Both medically disqualified groups had a significantly higher risk of EPTS discharge relative to accessions who were fully medically qualified.

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TABLE 2.59: CHARACTERISTICS OF ENLISTED ACTIVE COMPONENT ACCESSIONS IN 2008-2012 ENDING IN EPTS DISCHARGE: ALL SERVICES

	Accessions (n)	Discharged (n)	Discharged (%)	Crude RR	95% CI
Service					
Army (REF)	311,627	6,689	2.1	1.00	-
Navy	174,571	6,980	4.0	1.86	(1.80, 1.93)
Marine Corps	160,660	3,517	2.2	1.02	(0.98, 1.06)
Air Force	144,964	2,861	2.0	0.92	(0.88, 0.96)
Sex*					
Male (REF)	662,930	14,652	2.2	1.00	-
Female	128,891	5,395	4.2	1.89	(1.84, 1.95)
Age at Accession*					
17 – 20 (REF)	506,957	13,230	2.6	1.00	-
21 – 25	223,668	5,294	2.4	0.91	(0.88, 0.94)
> 25	61,192	1,522	2.5	0.95	(0.90, 1.00)
Race*					
White (REF)	593,619	15,013	2.5	1.00	-
Black	125,385	3,057	2.4	0.96	(0.93, 1.00)
Other	72,818	1,977	2.7	1.07	(1.02, 1.12)
Education Level*					
Below HS graduate**	3,514	94	2.7	1.02	(0.83, 1.24)
HS diploma (REF)	683,533	17,973	2.6	1.00	-
Some college	64,784	1,444	2.2	0.85	(0.80, 0.89)
Bachelor's or higher	39,900	536	1.3	0.51	(0.47, 0.56)
AFQT Score*					
93 – 99 (REF)	55,385	1,025	1.9	1.00	-
65 – 92	314,425	7,477	2.4	1.28	(1.20, 1.37)
50 – 64	214,175	5,888	2.7	1.49	(1.39, 1.59)
30 – 49	196,156	5,523	2.8	1.52	(1.42, 1.63)
11 – 29	5,349	132	2.5	1.33	(1.11, 1.59)
Medical Status					
Fully Qualified (REF)	685,267	15,880	2.3	1.00	-
Temporary DQ	38,623	1,168	3.0	1.30	(1.23, 1.38)
Permanent DQ	67,932	2,999	4.4	1.91	(1.83, 1.98)
Total	791,822	20,047	2.5		

RR: Relative Risk; CI: Confidence Interval; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification; REF: Referent Group

* Individuals with missing values for demographic variables are included in the total.

** Encompasses the following three cases: 1) one who is pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc.; 2) one who is not attending high school and who is neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school but is not yet a senior

Characteristics of enlisted reserve component accessions that ended in EPTS discharge are shown in Table 2.60. All services had significantly higher risk of EPTS discharge when compared to the Army. The highest risk of EPTS discharge was found in the Navy. The risk of EPTS discharge is significantly higher among females relative to males. Risk of EPTS discharge in those over 25 was significantly higher than among those aged 17-20. No significant differences were observed when comparing EPTS discharge risk in blacks relative to whites though risk of EPTS discharge was significantly lower in those in other race groups. Enlistees entering military service with education less than high school and those with a Bachelor's degree had significantly lower risk of EPTS discharge relative to high school graduates. Relative to the highest percentile AFQT score group AFQT scores in the 30th-64th percentile were associated with significantly higher EPTS discharge risk. Only permanent medical disqualification had a significantly higher risk of EPTS discharge relative to accessions who were fully medically qualified.

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TABLE 2.60: CHARACTERISTICS OF ENLISTED RESERVE COMPONENT ACCESSIONS IN 2008-2012 ENDING IN EPTS DISCHARGE: ALL SERVICES

	Accessions (n)	Discharged (n)	Discharged (%)	Crude RR	95% CI
Service					
Army (REF)	91,951	908	1.0	1.00	-
Navy	15,688	310	2.0	2.00	(1.76, 2.27)
Marine Corps	27,021	396	1.5	1.48	(1.32, 1.67)
Air Force	18,345	315	1.7	1.74	(1.53, 1.97)
Sex*					
Male (REF)	117,730	1,292	1.1	1.00	-
Female	35,275	637	1.8	1.65	(1.50, 1.81)
Age at Accession*					
17 – 20 (REF)	91,822	1,125	1.2	1.00	-
21 – 25	38,242	453	1.2	0.97	(0.87, 1.08)
> 25	22,345	331	1.5	1.21	(1.07, 1.37)
Race*					
White (REF)	113,039	1,415	1.3	1.00	-
Black	29,128	406	1.4	1.11	(1.00, 1.24)
Other	10,838	108	1.0	0.80	(0.66, 0.97)
Education Level*					
Below HS graduate**	8,369	76	0.9	0.70	(0.55, 0.88)
HS diploma (REF)	118,885	1,549	1.3	1.00	-
Some college	16,966	223	1.3	1.01	(0.88, 1.16)
Bachelor's or higher	8,768	81	0.9	0.71	(0.57, 0.89)
AFQT Score*					
93 – 99 (REF)	9,313	91	1.0	1.00	-
65 – 92	55,179	601	1.1	1.11	(0.90, 1.39)
50 – 64	38,405	550	1.4	1.47	(1.18, 1.83)
30 – 49	44,280	620	1.4	1.43	(1.15, 1.78)
11 – 29	1,717	12	0.7	0.72	(0.39, 1.30)
Medical Status					
Fully Qualified (REF)	131,742	1,579	1.2	1.00	-
Temporary DQ	8,276	110	1.3	1.11	(0.92, 1.34)
Permanent DQ	12,987	240	1.8	1.54	(1.35, 1.76)
Total	153,005	1,929	1.3		

RR: Relative Risk; CI: Confidence Interval; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification; REF: Referent Group

* Individuals with missing values for demographic variables are included in the total.

** Encompasses the following three cases: 1) one who is pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc.; 2) one who is not attending high school and who is neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school but is not yet a senior

Characteristics of enlisted National Guard accessions that ended in EPTS discharge are shown in Table 2.61. The vast majority of National Guard EPTS discharges were from the Army. The risk of EPTS discharge is significantly higher among females relative to males. No significant differences were observed when examining age. Both black and other race groups were significantly less likely to have an EPTS discharge than whites. Enlistees entering military service with education less than high school had significantly higher risk of EPTS discharge relative to high school graduates. Those with some college or higher had significantly lower risk of EPTS discharge. Relative to the highest percentile AFQT score group all AFQT score groups percentile were associated with significantly higher EPTS discharge risk. Both permanent and temporary medical disqualifications were associated with a significantly higher risk of EPTS discharge.

**TABLE 2.61: CHARACTERISTICS OF ENLISTED NATIONAL GUARD ACCESSIONS IN 2008-2012 ENDING IN EPTS
DISCHARGE: ARMY AND AIR FORCE**

	Accessions (n)	Discharged (n)	Discharged (%)	Crude RR	95% CI
Service					
Army (REF)	203,102	2,834	1.4	1.00	-
Air Force	25,636	6	0.0	0.02	(0.01, 0.04)
Sex*					
Male (REF)	182,676	2,176	1.2	1.00	-
Female	46,060	664	1.4	1.21	(1.11, 1.32)
Age at Accession*					
17 – 20 (REF)	142,425	1,807	1.3	1.00	-
21 – 25	55,120	646	1.2	0.92	(0.84, 1.01)
> 25	30,732	383	1.2	0.98	(0.88, 1.10)
Race*					
White (REF)	186,934	2,491	1.3	1.00	-
Black	32,714	289	0.9	0.66	(0.59, 0.75)
Other	9,090	60	0.7	0.50	(0.38, 0.64)
Education Level*					
Below HS graduate**	21,955	354	1.6	1.24	(1.10, 1.38)
HS diploma (REF)	162,464	2,121	1.3	1.00	-
Some college	32,126	278	0.9	0.66	(0.59, 0.75)
Bachelor's or higher	12,183	87	0.7	0.55	(0.44, 0.68)
AFQT Score*					
93 – 99 (REF)	13,989	87	0.6	1.00	-
65 – 92	82,055	809	1.0	1.59	(1.27, 1.98)
50 – 64	59,399	790	1.3	2.14	(1.72, 2.67)
30 – 49	67,841	1,120	1.7	2.65	(2.14, 3.30)
11 – 29	2,518	30	1.2	1.92	(1.27, 2.89)
Medical Status					
Fully Qualified (REF)	194,837	2,281	1.2	1.00	-
Temporary DQ	16,469	246	1.5	1.28	(1.12, 1.45)
Permanent DQ	17,432	313	1.8	1.53	(1.36, 1.72)
Total	228,738	2,840	1.2		

RR: Relative Risk; CI: Confidence Interval; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification; REF: Referent Group

* Individuals with missing values for demographic variables are included in the total.

** Encompasses the following three cases: 1) one who is pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc.; 2) one who is not attending high school and who is neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school but is not yet a senior

Disability Discharges in the First Year of Service

Table 2.62 through 2.71 describe disability discharges within first year of military service among enlisted Army, Navy, Marine Corps, and Air Force personnel who accessed during fiscal year 2008 to 2013. Relative risks are used to compare the likelihood of having a disability discharge among demographic groups. The baseline group chosen for each comparison depends on the factor being considered. For factors with some inherent order (e.g. age group which ranges from younger to older) it is first or last group in that order as appropriate. Otherwise, the baseline group is generally the largest group.

Table 2.62 presents the number of disability discharges reported among individuals that enlisted in the Army, Navy, Marine Corps and Air Force active component enlisted service during 2008 to 2013. Results are shown for each year of accession. The highest rate of disability discharges (0.64%) occurred in 2008. Rates of disability discharge in the first year of service have decreased in each subsequent year. The number of disability discharges in the first year of service for accessions in 2013 is underestimated due to an incomplete follow up time.

TABLE 2.62: DISABILITY DISCHARGES FROM ACTIVE COMPONENT WITHIN IN THE FIRST YEAR OF SERVICE AMONG 2008–2013 ACCESSIONS: ALL SERVICES

Year of accession	Accessed (n)	Evaluated within one year of accession	
		n	%
2008	162,700	1,044	0.64
2009	161,061	787	0.49
2010	159,745	573	0.36
2011	152,658	454	0.30
2012	155,658	341	0.22
2013*	165,905	122	0.07

*The rate of disability evaluation is underestimated due to lack of follow up data on individuals accessed in 2013.

Table 2.63 presents the number of disability discharges reported among individuals that accessed into the Army, Navy, Marine Corps and Air Force reserve component enlisted service during 2008 to 2013. Results are shown for each year of accession. The highest rate of disability discharges service (0.30%) occurred in 2008. Rates of disability discharge have decreased in each subsequent year. The number of disability discharges in the first year of service for accessions in 2013 is underestimated due to an incomplete follow up time.

TABLE 2.63: DISABILITY DISCHARGES FROM RESERVE COMPONENT IN THE FIRST YEAR OF SERVICE AMONG 2008–2013 ACCESSIONS: ALL SERVICES

Year of accession	Accessed (n)	Evaluated within one year of accession	
		n	%
2008	35,449	108	0.30
2009	34,969	69	0.20
2010	28,132	52	0.18
2011	30,305	42	0.14
2012	24,150	18	0.07
2013*	21,023	1	<0.01

*The rate of disability evaluation is underestimated due to lack of follow up data on individuals accessed in 2013.

Table 2.64 presents the number of disability discharges reported among individuals that accessed into the Army and Air Force National Guard enlisted service during 2008 to 2013. Results are shown for each year of accession. The highest rate of disability discharges (0.27%) occurred in 2008. Rates of disability discharge in the first year of service have decreased in each subsequent year. The number of disability discharges in the first year of service for accessions in 2013 is underestimated due to an incomplete follow up time.

TABLE 2.64: DISABILITY DISCHARGES FROM NATIONAL GUARD IN THE FIRST YEAR OF SERVICE AMONG 2008–2013 ACCESSIONS: ALL SERVICES

Year of accession	Accessed (n)	Evaluated within one year of accession	
		n	%
2008	53,479	144	0.27
2009	47,136	101	0.21
2010	46,027	86	0.19
2011	40,109	47	0.12
2012	41,988	14	0.03
2013*	28,047	2	0.01

*The rate of disability evaluation is underestimated due to lack of follow up data on individuals accessed in 2013.

Table 2.65 shows demographic characteristics, the total number of accessions, and the relative risk of having a disability discharge among active component enlistees in the Army, Navy, Marine Corps and the Air Force. Relative to the Army, disability discharge was significantly less likely among enlistees from all other services. Females were 2.51 times more likely to be disability discharged compared to males. Risk also increased significantly with increasing age. Being any race other than white showed decreased risk of being disability discharge.

In regards to education level, personnel who had not finished high school at the time of accession were 2.44 times, and those with some college education were 1.39 times, more likely to have a disability discharge compared to individuals with a high school diploma. Personnel with a Bachelor or above degree were less likely to have a disability discharge. Risk of disability discharge was higher in all Armed Forces Qualification Test (AFQT) score groups relative to

those with the highest AFQT scores, the 93rd-99th percentile group. Those with any type of medical disqualification were at significantly higher risk of disability discharge in the first year of service relative those who were fully qualified.

TABLE 2.65: DISABILITY DISCHARGES FROM ACTIVE COMPONENT IN THE FIRST YEAR OF SERVICE AMONG 2008-2013 ACCESSIONS: ALL SERVICES

Discharged within one year of accession					
	Accessions (n)	n	%	Crude RR	95% CI
Service					
Army (REF)	378,325	2,031	0.54	1.00	-
Navy	215,416	188	0.09	0.16	(0.14, 0.19)
Marine Corps	192,837	628	0.33	0.61	(0.55, 0.66)
Air Force	171,149	474	0.28	0.52	(0.47, 0.57)
Sex*					
Male (REF)	800,783	2,230	0.28	1.00	-
Female	156,943	1,091	0.70	2.51	(2.33, 2.70)
Age at Accession*					
17 – 20 (REF)	617,611	1,837	0.30	1.00	-
21 – 25	268,560	1,009	0.38	1.26	(1.17, 1.37)
>25	71,551	475	0.66	2.24	(2.02, 2.48)
Race*					
White (REF)	713,012	2,679	0.38	1.00	-
Black	156,158	387	0.25	0.66	(0.59, 0.73)
Other	88,557	255	0.29	0.77	(0.67, 0.87)
Education Level*					
Below HS	3,530	29	0.82	2.44	(1.69, 3.53)
HS diploma (REF)	828,362	2,797	0.34	1.00	-
Some college	76,234	358	0.47	1.39	(1.25, 1.56)
Bachelor's or	49,508	137	0.28	0.82	(0.69, 0.97)
AFQT Score*					
93 – 99 (REF)	66,657	194	0.29	1.00	-
65 – 92	380,529	1,327	0.35	1.20	(1.03, 1.39)
50 – 64	261,164	956	0.37	1.26	(1.08, 1.47)
30 – 49	236,313	811	0.34	1.18	(1.01, 1.38)
11 – 29	5,461	31	0.57	1.96	(1.34, 2.86)
Medical Status					
Fully Qualified (REF)	829,183	2,612	0.32	1.00	-
Temporary DQ	43,544	273	0.63	2.00	(1.76, 2.26)
Permanent DQ	85,000	436	0.51	1.63	(1.47, 1.80)

RR: Relative Risk; CI: Confidence Interval; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification; REF: Referent Group

* Individuals with missing values for demographic variables are included in the total.

** Encompasses the following three cases: 1) one who is pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc.; 2) one who is not attending high school and who is neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school but is not yet a senior

Table 2.66 shows demographic characteristics, the total number of accessions, and the relative risk of having a disability discharge among reserve component enlistees in the Army, Navy, Marine Corps and the Air Force. Relative to the Army, disability discharge was significantly less likely among enlistees from the Navy and Air Force. The risk of discharge among Marines was not significantly different from the risk in the Army. Females were 2.91 times more likely to be disability discharged compared to males. Risk also increased significantly with increasing age. The rate of disability discharge did not differ significantly when comparing white and

black race. However, those with races other than white or black were significantly less likely to be disability discharged.

In regards to education level and AFQT scores, no significant differences in the risk of disability discharge were observed when comparing reserve component enlistees. No significant differences in the risk of disability discharge were observed when comparing fully qualified accessions to those with a history of disqualification.

TABLE 2.66: DISABILITY DISCHARGES FROM RESERVE COMPONENT IN THE FIRST YEAR OF SERVICE AMONG 2008-2013 ACCESSIONS: ALL SERVICES

Discharged within one year of accession					
	Accessions (n)	n	%	Crude RR	95% CI
Service					
Army (REF)	102,634	192	0.19	1.00	-
Navy	18,799	8	0.04	0.23	(0.11, 0.46)
Marine Corps	31,516	74	0.23	1.26	(0.96, 1.64)
Air Force	21,079	16	0.08	0.41	(0.24, 0.68)
Sex*					
Male (REF)	133,972	155	0.12	1.00	-
Female	40,053	135	0.34	2.91	(2.32, 3.68)
Age at Accession*					
17 – 20 (REF)	105,611	140	0.13	1.00	-
21 – 25	42,998	86	0.20	1.51	(1.15, 1.98)
>25	14,801	64	0.43	1.95	(1.45, 2.62)
Race*					
White (REF)	127,320	230	0.18	1.00	-
Black	34,031	48	0.14	0.78	(0.57, 1.07)
Other	12,677	12	0.09	0.52	(0.29, 0.94)
Education Level*					
Below HS graduate**	8,962	1	0.01	0.07	(0.01, 0.47)
HS diploma (REF)	136,150	229	0.17	1.00	-
Some college	18,755	42	0.22	1.33	(0.96, 1.85)
Bachelor's or higher	10,143	18	0.18	1.06	(0.65, 1.71)
AFQT Score*					
93 – 99 (REF)	10,522	15	0.14	1.00	-
65 – 92	63,346	106	0.17	1.17	(0.68, 2.02)
50 – 64	43,814	71	0.16	1.14	(0.65, 1.99)
30 – 49	50,149	91	0.18	1.27	(0.74, 2.20)
11 – 29	1,921	6	0.31	2.19	(0.85, 5.66)
Medical Status					
Fully Qualified (REF)	150,084	238	0.16	1.00	-
Temporary DQ	8,929	19	0.21	1.34	(0.84, 2.14)
Permanent DQ	15,015	33	0.22	1.39	(0.96, 2.00)

RR: Relative Risk; CI: Confidence Interval; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification; REF: Referent Group

* Individuals with missing values for demographic variables are included in the total.

** Encompasses the following three cases: 1) one who is pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc.; 2) one who is not attending high school and who is neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school but is not yet a senior

Table 2.67 shows demographic characteristics, the total number of accessions, and the relative risk of having a disability discharge among National Guard enlistees in the Army and Air Force. Relative to the Army, disability discharge was significantly less likely among enlistees from the Air Force. Females were 3.89 times more likely to be disability discharged compared to males. Risk also increased significantly with increasing age. Both temporary and permanent medical disqualifications prior to accession were associated with a significantly higher risk of disability discharge. No significant differences in the risk of disability discharge were observed in National Guard enlistees by race, education, or AFQT score percentile.

TABLE 2.67: DISABILITY DISCHARGES FROM NATIONAL GUARD IN THE FIRST YEAR OF SERVICE AMONG 2008-2013 ACCESSIONS: ALL SERVICES

Discharged within one year of accession					
	Accessions (n)	n	%	Crude RR	95% CI
Service					
Army (REF)	226,724	388	0.17	1.00	-
Air Force	30,061	6	0.02	0.12	(0.05, 0.26)
Sex*					
Male (REF)	204,303	197	0.10	1.00	-
Female	52,480	197	0.38	3.89	(3.20, 4.74)
Age at Accession*					
17 – 20 (REF)	161,537	177	0.11	1.00	-
21 – 25	61,111	112	0.18	1.68	(1.32, 2.13)
>25	35,595	105	0.29	2.86	(2.25, 3.64)
Race*					
White (REF)	208,197	333	0.16	1.00	-
Black	38,229	48	0.13	0.79	(0.58, 1.06)
Other	10,359	13	0.13	0.78	(0.45, 1.37)
Education Level*					
Below HS graduate**	24,432	19	0.08	0.48	(0.30, 0.77)
HS diploma (REF)	183,020	294	0.16	1.00	-
Some college	35,453	60	0.17	1.05	(0.80, 1.39)
Bachelor's or higher	13,868	21	0.15	0.94	(0.61, 1.47)
AFQT Score*					
93 – 99 (REF)	15,603	25	0.16	1.00	-
65 – 92	91,896	120	0.13	0.98	(0.63, 1.50)
50 – 64	66,048	122	0.18	1.38	(0.90, 2.12)
30 – 49	76,994	124	0.16	1.20	(0.78, 1.85)
11 – 29	3,179	3	0.09	0.70	(0.21, 2.33)
Medical Status					
Fully Qualified (REF)	218,954	310	0.14	1.00	-
Temporary DQ	17,715	42	0.24	0.68	(0.49, 0.94)
Permanent DO	20,116	42	0.21	1.14	(0.74, 1.74)

RR: Relative Risk; CI: Confidence Interval; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification; REF: Referent Group

* Individuals with missing values for demographic variables are included in the total.

** Encompasses the following three cases: 1) one who is pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc.; 2) one who is not attending high school and who is neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school but is not yet a senior

Tables 2.68-2.71 show the leading ten diagnoses for enlisted personnel who accessed from 2008 to 2013 and had a disability discharge. Results are shown by service, regardless of component.

The majority of Army enlistees disability discharged were diagnosed with conditions falling within two musculoskeletal categories: impairment, limitation and ankylosis of the joint, spine, skull limbs and extremities followed by prosthetic implants, and diseases of the musculoskeletal system (Table 2.58). Only 4% of disability discharges from the Army were for the third most common condition: diseases of the peripheral nerves.

Among Navy disability discharges (Table 2.59) the leading disability diagnosis was impairment, limitation and ankylosis of the joint, spine, skull limbs and extremities (22%) followed by prosthetic implants and diseases of the musculoskeletal system (13%). About 9% of disability discharges in the Navy were related to the third leading disability, convulsive disorders.

The largest diagnosis category among Marine Corps enlistees was impairment limitation and ankylosis of the joints, spine, skull, limbs and extremities (26%). Prosthetic implants and diseases of the musculoskeletal system was the second leading category (12%). Only 5% of disability discharges from the Marine Corps were for the third most common condition: diseases of the peripheral nerves.

In the Air Force the most common reasons for disability discharge were the same as the other three services: impairment limitation and ankylosis of the joints, spine, skull, limbs and extremities (35%) and prosthetic implants and diseases of the musculoskeletal system was the second leading category (12%). The Air Force had the largest percentage of disability discharges due to affective and non-psychotic mental disorders (10%), which was the third leading cause of disability in the first year of Air Force service.

TABLE 2.68: DIAGNOSIS CATEGORIES FOR DISABILITY DISCHARGES AMONG FIRST-TIME ENLISTED PERSONNEL IN THE FIRST YEAR OF SERVICE FOR 2008–2013 ACCESSIONS: **ARMY**

Diagnosis category	2008-2013	
	n	% *
Impairment, limitation and ankylosis of joints, spine, skull, limbs and extremities	1,664	63.7
Prosthetic implants and diseases of the musculoskeletal system	790	30.3
Diseases of the peripheral nerves	102	3.9
Affective and non-psychotic mental disorders	57	2.2
Diseases of the endocrine system	38	1.5
Diseases of the trachea and bronchi	30	1.1
Diseases of the digestive system	28	1.1
Muscle injuries	27	1.0
Miscellaneous neurological disorders	24	0.9
Convulsive disorders	22	0.8
Total individuals	2,611	

* Represents the proportion of individuals evaluated for disability who were evaluated for each disability type.

TABLE 2.69: DIAGNOSIS CATEGORIES FOR DISABILITY DISCHARGES AMONG FIRST-TIME ENLISTED PERSONNEL IN THE FIRST YEAR OF SERVICE FOR 2008- 2013 ACCESSIONS: **NAVY**

Diagnosis category	2008-2013	
	n	% *
Impairment, limitation and ankylosis of joints, spine, skull, limbs and extremities	43	21.9
Prosthetic implants and diseases of the musculoskeletal system	25	12.8
Convulsive disorders	18	9.2
Affective and non-psychotic mental disorders	9	4.6
Diseases of the peripheral nerves	7	3.6
Organic diseases of the central nervous system	7	3.6
Schizophrenia and other psychotic disorders	6	3.1
Diseases of the digestive system	5	2.6
Diseases of the cranial nerves	3	1.5
Diseases of the heart	3	1.5
Total individuals	196	

* Represents the proportion of individuals evaluated for disability who were evaluated for each disability type.

TABLE 2.70: DIAGNOSIS CATEGORIES FOR DISABILITY DISCHARGES AMONG FIRST-TIME ENLISTED PERSONNEL WITHIN THE FIRST YEAR OF SERVICE FOR 2008–2013: MARINE CORPS

Diagnosis category	2008-2013	
	n	%*
Impairment, limitation and ankylosis of joints, spine, skull, limbs and extremities	182	25.9
Prosthetic implants and diseases of the musculoskeletal system	82	11.7
Diseases of the peripheral nerves	37	5.3
Affective and non-psychotic mental disorders	21	3.0
Diseases of the endocrine system	16	2.3
Diseases of the digestive system	15	2.1
Muscle injuries	14	2.0
Diseases of the trachea and bronchi	12	1.7
Organic diseases of the nervous system	10	1.4
Schizophrenia and other psychotic disorders	10	1.4
Total individuals	702	

*Represents the proportion of individuals evaluated for disability who were evaluated for each disability type.

TABLE 2.71: DIAGNOSIS CATEGORIES FOR DISABILITY DISCHARGES AMONG FIRST-TIME ENLISTED PERSONNEL WITHIN THE FIRST YEAR OF SERVICE FOR 2008–2013: AIR FORCE

Diagnosis category	2008-2013	
	Count	%*
Impairment, limitation and ankylosis of joints, spine, skull, limbs and extremities	174	35.1
Prosthetic implants and diseases of the musculoskeletal system	87	17.5
Affective and non-psychotic mental disorders	47	9.5
Diseases of the trachea and bronchi	41	8.3
Schizophrenia and other psychotic disorders	31	6.3
Diseases of the peripheral nerves	24	4.8
Muscle injuries	24	4.8
Diseases of the digestive system	18	3.6
Diseases of the endocrine system	15	3.0
Miscellaneous neurological disorders	13	2.6
Total individuals	496	

*Represents the proportion of individuals evaluated for disability who were evaluated for each disability type.

Data Sources

The Accession Medical Standards Analysis and Research Activity (AMSARA) requests and receives data from various sources, most of which are the primary collection agencies for the data they provide to AMSARA. Because data are seldom collected with the goal of epidemiologic study, AMSARA coordinates with the appropriate points of contact to ensure that the following major data sources needed for AMSARA studies are in an appropriate form for epidemiologic work.

As mentioned under “Charter and Supporting Documents,” AMSARA maintains strict confidentiality of all data it receives. No external access to the data is allowed, and internal access is limited to a small number of primary analysts on an as-necessary basis. Research results are provided only at the aggregate level, with no possibility of individual identification.

MEPS

AMSARA receives data on all applicants who undergo an accession medical examination at any of the 65 Military Entrance Processing Stations (MEPS) sites. These data, provided by US Military Entrance Processing Command (USMEPCOM), North Chicago, IL, contain several hundred demographic, medical, and administrative elements on recruit applicants for each applicable branch (regular enlisted, reserve, National Guard) of each service (Air Force, Army, Coast Guard, Marines, and Navy). These data also include records on a relatively small number of officer recruit applicants and other non-applicants receiving periodic physical examinations.

The MEPS records provide extensive medical examination information, including date of examination, medical qualification status, medical disqualification codes (where relevant), medical conditions observed by or reported to physicians, and any waiver requirements. Medical conditions among applicants fall into two categories, temporary (condition that can be remediated, e.g., being overweight) or permanent (condition that remains with the applicant, e.g., history of asthma). For those applicants with a permanent disqualification due to a permanent condition, an accession medical waiver from a service-specific waiver authority is required for the applicant to be eligible for accession into the service (see “Waiver”). Results of some specific tests are also extracted from the MEPS records including those for hearing/vision, alcohol/drug use, and measurements of height, weight, and blood pressure.

Gain and Loss Files

The Defense Manpower Data Center (DMDC) provides data on individuals entering military service (gain or accession) and on individuals exiting military service (loss or discharge). Gain and loss data, which are AMSARA’s primary sources of information about who is, or has been, in the military, include when an individual began duty and when or if an individual exited the

military. From this information the length of service can be determined for any individual entering and leaving during the periods studied.

Gain data include approximately 50 variables. Of these, AMSARA has identified 25 of primary interest: personal identifiers (e.g., name and SSN) for linking with other data; demographics such as age, education, and Armed Forces Qualification Test (AFQT) score at the time of accession; and service information including date of entry, Unit Identification Code (UIC) of initially assigned unit, initially assigned Military Occupation Specialty code (MOS), and Initial Entry Training (IET) site. These data are combined with MEPS data to determine accession percentages among applicants by demographic and other variables. Also, as mentioned under “MEPS,” these linked data are used in epidemiologic investigations related to the military’s accession medical standards.

Loss data also include approximately 50 variables, many of which are the same as those found in the gain file, although they reflect the individual’s status at the time of loss rather than at the time of gain. The variables of primary interest to AMSARA are personal identifiers for linking with other data, the loss date for computing length of service, the UIC and MOS for grouping service members by occupation, and the Inter-service Separation Code (ISC) as a secondary source of the reason for leaving the military. These data serve as the primary source of information on all-cause attrition from the service and are linked with the MEPS and gain data for studies of attrition.

Accession Medical Waiver

AMSARA receives records on all active and reserve component recruits who were considered for an accession medical waiver, i.e., those who received a permanent medical disqualification at the MEPS (see “MEPS”) and sought a waiver for that disqualification. Each service is responsible for making waiver decisions about its applicants. Data on these waiver considerations are generated and provided to AMSARA by each service waiver authority. Although the specifics of these data vary by service, they generally contain identifiers (e.g., name and SSN) for linking with other data and information about the waiver consideration including the medical condition(s) for which an individual was seeking a waiver and the final decision of the waiver authority.

Air Force

Air Education and Training Command (Randolph Air Force Base, TX) transmits, upon request, data on active and reserve component officer and enlisted accession medical waivers. These data include SSN, name, action (e.g., approved, disapproved, other), and date of waiver consideration. In addition, ICD-9 codes are used to define the medically disqualifying condition(s) for which the waiver is being considered.

Army

The U.S. Army Recruiting Command (USAREC, Fort Knox, KY) has provided annual accession medical waiver data since January 1997. Each data record contains name, SSN, action (e.g., approved, disapproved, other), and date of waiver consideration. In addition, ICD-9 codes are used to define the medically disqualifying condition(s) for which the waiver is being considered.

Marine Corps

The U.S. Navy Bureau of Medicine and Surgery (BUMED) in Washington, DC, provides, on request, medical waiver data for enlisted personnel. Data include name, SSN, date of waiver consideration, and recommended action (e.g., approved, disapproved, other). In addition, the subset of ICD-9 codes listed in DoD Instruction (DoDI) 6130.03 is used to indicate the medically disqualifying condition(s) for which the waiver is being considered.

Navy

The Office of the Commander, U.S. Navy Recruiting Command (Millington, TN) provides accession medical waiver data on applicants for enlisted service in the Navy since May 2000. Medically disqualifying conditions reported within the Navy waiver data file are recorded using in-house codes indicating which section of the DoDI 6130.03 is the basis for disqualification and waiver.

Hospitalization

Data on hospitalizations are obtained from the Military Health Systems Data Repository (MDR) annually. These data contain information on admissions of active duty officers and enlisted personnel to any military hospital; this includes individuals in the reserve component and National Guard who are activated or who have been activated within 6 months prior to admission. Information on each visit includes SSN for linking with other data, demographic characteristics (e.g., gender, age, and race), and details about the hospitalization. In particular, the medical diagnosis associated with the hospitalization is coded according to the ICD-9. Date of admission, date of disposition, number of sick days, number of bed days, and indicators of the medical outcome are also included.

EPTS Discharges

Discharges for conditions that existed prior to service (EPTS) medical conditions are of vital interest to AMSARA. A discharge for a medical condition can be classified as an EPTS discharge if the condition was verified to have existed before the recruit began service and if the complications leading to discharge arose no more than 180 days after the recruit began duty. USMEPCOM requests a copy of official paperwork on all EPTS discharges and records certain information about each. This information includes a general medical categorization (20 categories) of the reason(s) for discharge and a judgment on each discharge regarding why (i.e., concealment, waiver, or unawareness) the person was not rejected for service on the basis of the preexisting condition. Beginning in August 1996, this paperwork has been regularly forwarded

by USMEPCOM to AMSARA for additional data extraction, including more specific coding of medical conditions leading to discharge.

The primary limitation the EPTS discharge data is completeness. Table 3.1 summarizes the numbers of records provided to AMSARA over 2008-2012. The Marine Corps training site in San Diego has not provided EPTS discharge records since 2006. In the Army, both Ft. Jackson and Ft. Knox training sites have not provided EPTS records to AMSARA for FY 2012 and all training sites except Ft. Benning appear to have underreported EPTS discharges in FY 2012. Note that the numbers of records have been unstable over time for nearly all IET sites. While some variability in numbers of EPTS records over time is expected, underreporting is clearly a major source of the fluctuations.

TABLE 3.1: EPTS DISCHARGE DATA REPORTED TO USMEPCOM BY TRAINING SITE AND YEAR[†]

Training Site		Fiscal Year of EPTS Discharge					Total
		2008	2009	2010	2011	2012	
Army	Fort Benning	861	967	520	866	885	4,099
	Fort Jackson	691	19	606	838	1	2,155
	Fort Knox	346	333	286	138	0	1,103
	Fort Leonard Wood	800	837	804	873	240	3,554
	Fort Sill	335	187	185	299	133	1,139
Navy	Great Lakes	1,885	1,532	1,530	1,504	1,863	8,314
Marine Corps	Parris Island	1,295	803	772	861	654	4,385
	San Diego	0	0	0	0	0	0
Air Force	Lackland AFB	1,123	634	680	655	409	3,501
Coast Guard	Cape May	316	188	165	220	131	1,020
Total		7,652	7,652	5,500	5,548	6,254	4,316

[†] Numbers may not sum to totals shown in Section 2 because information from specific training sites is incomplete and other requirements for records are different.

Disability Discharges in the First Year of Service

Data on disability discharge considerations are compiled separately for each service at its disability agency. The U.S. Army Physical Disability Agency has provided data on Army disability evaluations during 1995-2013 and continues to provide these data. The Air Force Personnel Center has provided data on the first evaluation for all individuals who received a final disposition of separation or retirement (i.e. fit dispositions, retained on the temporary disability retirement list not included) for the first time during the period of 1995–2010, but only provides data on all evaluations from the period of 2007-2013. Data from the Secretary of the Navy, Council of Review Boards, including all disability discharge considerations for the Navy and Marine Corps, are available from 2000 to 2013.

All disability agencies provide information on all disability cases considered, including personal identifiers (e.g., name and SSN), program (e.g., regular enlisted, academy, or officer), date of consideration, and disposition (e.g., permanent disability, separation with or without benefits, temporary disability, or return to duty as fit). For individuals receiving a disability discharge, medical condition codes and degree of disability (rating) are also included. The medical condition(s) involved in each case are described using the condition codes of the Veterans Affairs Schedule for Rating Disabilities (VASRD). This set is less comprehensive than the ICD-9 codes. In some cases the disabling condition has no associated code, so the code most closely resembling the true condition is used. AMSARA therefore only uses broad categories of disability condition codes, defined in Table 3.2, rather than attempting to interpret specific codes.

TABLE 3.2: VASRD CODE GROUPINGS

VASRD code	Conditions encompassed	VASRD code	Conditions encompassed
5000 - 5099	Prosthetic Implants and diseases of the musculoskeletal system	7300 - 7399	Diseases of the digestive system
5100 - 5199	Amputation or anatomical loss of upper and lower extremities	7500 - 7599	Diseases of the genitourinary system
5200 - 5299	Impairment, limitation, ankylosis of joints, spine, skull, limbs, and extremities	7600 - 7699	Gynecological conditions and disorders of the breast
5300 - 5399	Muscle injuries	7700 - 7799	The hemic and lymphatic systems
6000 - 6099	Diseases of the Eye or loss of vision	7800 - 7899	Diseases of the skin
6200 - 6269	Diseases of the Ear	7900 - 7999	Diseases of the endocrine system
6270 - 6279	Diseases of other sense organs (smell and taste)	8000 - 8099	Organic Diseases of the Central Nervous System
6280 - 6299	Other and unspecified disorders of the sensory organs	8100 - 8199	Miscellaneous neurological disorders
6300 - 6399	Infectious diseases, immune disorders, and nutritional deficiencies	8200 - 8499	Diseases of the cranial nerves
6500 - 6599	Diseases of the nose and throat	8500 - 8799	Diseases of the peripheral nerves
6600 - 6699	Diseases of the trachea and bronchi	8900 - 8999	Convulsive disorders
6700 - 6799	Tuberculosis	9200 - 9299	Schizophrenia and other psychotic disorders
6800 - 6899	Diseases of the respiratory system	9300 - 9399	Organic psychotic disorders
7000 - 7099	Diseases of the heart	9400 - 9599	Affective and nonpsychotic mental disorders
7100 - 7199	Diseases of the arteries and veins	9900 - 9999	Dental and oral conditions
7200 - 7299	Injury to the mouth, lips, tongue, and esophagus		

Charter and Supporting Documents

HA Control #: NONE
Due Date: NONE

February 28, 1995

ASSISTANT SECRETARY OF DEFENSE
(HEALTH AFFAIRS)
EXECUTIVE SUMMARY/COVER BRIEF

MEMORANDUM FOR THE ASSISTANT SECRETARY OF DEFENSE
(HEALTH AFFAIRS)

THROUGH: *Jm* Dr. Sue Bailey, DASD (CS)

FROM: Action Officer, Colonel Ed Miller

SUBJECT: Accession Medical Standards Analysis and Research
Activity (AMSARA)

PURPOSE:

SIGNATURE---on request that the Assistant Surgeon
General of the Army (Research and Development)
establish an Accession Medical Standards Analysis
and Research Activity (AMSARA).

DISCUSSION:

The Accessions Medical Standards Working Group
which met over the summer sponsored through MFIM
funding completed a functional economic analysis
of the medical accessions examination process.
One of the critical recommendations made by the
Group was to establish a research activity to
provide the Medical Accessions Standards Council
(also recommended) with an evidence-based analysis
of DoD accessions medical standards. The
memorandum tasks the Army with the responsibility
of establishing the activity resourced under the
Defense Health Program. This has already been
staffed with the Assistant Surgeon General of the
Army (Research and Development)

RECOMMENDATION:

Sign tasking memorandum to Army Surgeon General.

✓ COORDINATION:

✓ Mr. Conte, PDUSD(P&R) _____
Mr. Maddy, HB&P: See attached memo
✓ Mr. Richards, EO: _____
Dr. Martin, PDASD: _____

CHARTER & DOCUMENTS

CHARTER AND SUPPORTING DOCUMENTS



HEALTH AFFAIRS

THE ASSISTANT SECRETARY OF DEFENSE

WASHINGTON, D. C. 20301-1200

DEC 06 1995

MEMORANDUM FOR SURGEON GENERAL OF THE ARMY

SUBJECT: Military Medical Standards Analysis and Evaluation Data Set

The personnel community has asked OASD/HA to develop a fact based accessions policy to minimize medical attrition, quantitate risk in medical waivers, and to defend accession decisions when challenged.

The offices of Clinical Services and Military Personnel Policy have worked closely with epidemiologists at Walter Reed Army Institute of Research on the concept of a Military Medical Standard Analysis and Evaluation Data Set (MMSABDS) to apply quantitative analysis to a longitudinal data base.

The Army Center for Health Promotion and Preventive Medicine (CHPPM) maintains a data base of personnel, hospitalization, deployment and separation information for all Services. I would like WRAIR, in coordination with CHPPM, to serve as consultants to the Accession Medical Standard Steering Committee, modify and maintain the data base, and coordinate field research to answer specific questions germane to accession policy.

Therefore, I request that, by the end of December 1995, a proposal be submitted through you from WRAIR, outlining the consultant role and modifications needed to the data base. This should include funding requirements.

Edward D. Martin /br
Stephen C. Joseph, M.D., M.P.H.

cc:
Commander WRAIR

DEPARTMENT OF DEFENSE
ACCESSION MEDICAL STANDARDS
STEERING COMMITTEE

CHARTER

I. ESTABLISHMENT, PURPOSE AND SCOPE

A. ESTABLISHMENT

The Under Secretary of Defense (Personnel and Readiness) establishes a Department of Defense Accession Medical Standards Steering Committee (hereafter referred to as the "Committee"). The Committee shall operate under the joint guidance of the Assistant Secretaries of Defense (Force Management Policy and Health Affairs [FMP & HA].)

B. PURPOSE

The Committee's main objective is to ensure the appropriate use of military members with regard to medical/physical characteristics, assuring a cost-efficient force of healthy members in military service capable of completing initial training and maintaining worldwide deployability. The primary purposes of the Committee are: (1) integrating the medical and personnel communities in providing policy guidance and establishing standards for accession medical/physical requirements, and (2) establishing accession medical standards and policy based on evidence-based information provided by analysis and research.

C. SCOPE OF ACTIVITY

1. The Committee's responsibility involves:

- a. Providing policy oversight and guidance to the accession medical/physical standards setting process.
- b. Directing research and studies necessary to produce evidenced-based accession standards making the best use of resources.
- c. Ensuring medical and personnel coordination when formulating accession policy changes.
- d. Overseeing the common application of the accession medical standards as outlined in DoD Directive 6130.3, "Physical Standards for Appointment, Enlistment, and Induction."

e. Interfacing with other relevant Department of Defense and Department of Transportation organizations.

f. Recommending promulgation of new DoD directives as well as revisions to existing directives.

g. Recommending legislative proposals concerning accession medical/physical processing.

h. Reviewing, analyzing, formulating and implementing policy concerning the accession physical examination.

i. Issuing policy letters or memoranda providing interpretation of provisions of DoD directives.

j. Resolving conflicts of application of accession medical/physical standards and policies among the Military Services and other authorized agents.

k. Maintaining records and minutes of Committee meetings.

II. ORGANIZATION

A. The Committee will be co-chaired by the Deputy Assistant Secretary of Defense (Military Personnel Policy) and the Deputy Assistant Secretary of Defense (Clinical Services). This will facilitate tasking the Deputy Chiefs of Staff for Personnel and the Surgeons General to assign staffers to relevant working groups, and to ensure DCS/Personnel and Surgeon General personal involvement with the various issues. The Committee will convene semiannually, at a minimum, and at the discretion of the Chairpersons.

B. Committee members are appointed by the Under Secretary of Defense (Personnel and Readiness) and provide ongoing liaison with their respective organizations concerning matters of medical/physical accession policy.

C. The Committee shall be composed of representatives from the following:

Office of the Assistant Secretary of Defense (Force Management Policy)

Office of the Assistant Secretary of Defense (Health Affairs)

Office of the Assistant Secretary of Defense (Reserve Affairs)

Office of Service Surgeons General

Office of Service Deputy Chiefs of Staff for Personnel, and Chief of Personnel and Training, HQ U.S. Coast Guard.

D. Representatives from the Office of the Assistant Secretary of Defense (Force Management Policy) and the Office of the Assistant Secretary of Defense (Health Affairs) shall serve as executive secretaries for the Committee, and maintain a working group, composed of representatives from each of the offices mentioned above, to receive and review issues pertinent to accession policy.

E. The Commander, U.S. Military Entrance Processing Command, and the Director, DoD Medical Examination Review Board shall serve as advisors to the Committee.

F. The Committee may invite consultants (i.e., training, recruiting, epidemiology) at the discretion of the Chairpersons.

Approved: JAN 16 1996
Date



EDWIN DORN

Frequently Used Acronyms

AFQT	Armed Forces Qualification Test
AIM	Assessment of Individual Motivation
AMSARA	Accession Medical Standards Analysis and Research Activity
AMSWG	Accession Medical Standards Working Group
ARI	Army Research Institute for the Behavioral and Social Sciences
ARMS	Assessment of Recruit Motivation and Strength
BMI	Body Mass Index
BUMED	Navy Bureau of Medicine and Surgery
DMDC	Defense Manpower Data Center
DoD	Department of Defense
DQ	Disqualified
EBF	Exceeding Body Fat Standards
ETS	Expiration of Term of Service
EPTS	Existed Prior to Service
FY	Fiscal Year
IET	Initial Entry Training
ICD-9	<i>International Classification of Diseases</i> , 9 th Revision
IRR	Incident Rate Ratio
ISC	Interservice Separation Code
MEPS	Military Entrance Processing Station
MOS	Military Occupation Specialty
MSI	Musculoskeletal Injuries
OMF	Other Medical Failure
PDR	Physical Demand Rating
SSN	Social Security Number
TAPAS	Tailored Adaptive Personality Assessment System
USAREC	U.S. Army Recruiting Command
USMEDCOM	U.S. Medical Command
USMEPCOM	U.S. Military Entrance Processing Command
VASRD	Veterans Administration Schedule for Rating Disabilities
WQ	Weight-qualified
WRAIR	Walter Reed Army Institute of Research



Accession Medical Standards Analysis & Research Activity

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